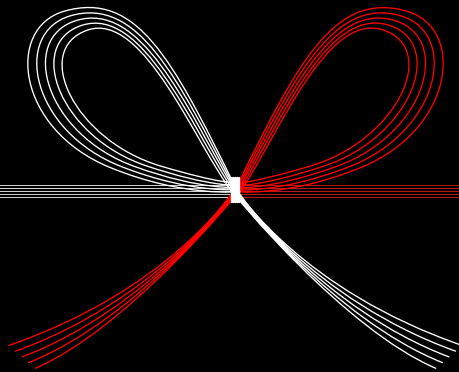


# Sustainability vs Culture

Juxtaposing sustainability with packaging phenomena  
of Japanese high-end confectionery



Ryoji Matsuzaki

Master's Thesis

Aalto University School of Arts, Design and Architecture

Master of Arts

International Design Business Management 2020



On the title page of this book is an illustrated *Mizuhiki*, which is a set of celebratory ornamental cords used in Japanese gift-giving occasions. I have seen it all my life, but had never given it much thought to why it was so important, until I started this thesis.

The act of tying the cords not only serves as injecting the sender's spirit into the object, but also as entrapping sanctity, either holy or evil, within the packaged. That discovery, to me, was both enlightening and frightening.

Simultaneously, the merging of the cords - linking to create harmony and balance - shed light on how two disparate ideas can converge into one, and became an inspiration for the final discussion of this thesis.

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Master's Thesis, 30 ECTS

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Advisor : Markus Joutsela

Supervisor : Peter McGrory



**Aalto University**  
School of Arts, Design  
and Architecture

<b>Author</b>	Ryoji Matsuzaki	
<b>Title of thesis</b>	Sustainability vs Culture : Juxtaposing sustainability with packaging phenomena of Japanese high-end confectionery	
<b>Department</b>	Department of Design	
<b>Degree programme</b>	International Design Business Management	
<b>Year</b> 2020	<b>Number of pages</b> 115	<b>Language</b> English

## ABSTRACT

Climate change is an imminent threat with severe impacts across the world. The concept of environmental sustainability therefore prevails as a blazing trend that countries, industries, and consumers must prioritize. In order to maximize the effectiveness of efforts and actions, it is imperative to consider the matter in the context of national, cultural, and societal landscapes. In this regard, cultural practices may act as hindrance to sustainability. Such examples can be seen in modern packaging practices in Japan that seem to inherently contradict the notion of sustainability.

This Master's thesis uncovers the reasons behind the current state of Japanese packaging, focusing on high-end confectionery, and sustainable thinking in the field of packaging. Numerous studies have been published in both areas, but combining the two, especially in a certain cultural context, is relatively novel.

The first phase of this thesis is done through theoretical study, where the meaning of Japanese packaging is discovered as quite different than that of its Western counterparts. It is then complemented with frameworks, trends, and innovations of sustainable packaging in the world today. The second phase employs a multimethod approach, combining

quantitative and qualitative research methods in different phases, particularly to extract first-hand insight on packaging in Japan. Through the discussions and synthesis of the empirical study, the thesis concludes by speculating the future of packaging design in Japan, marrying the trends of sustainability and Japanese culture.

The study identifies three things. Firstly, in the flow of time, the attention to sustainability in Japan is surging, and the ostensibly contradicting forces are starting to look in the same direction. Secondly, while some of the tangible practices of packaging for high-end confectionery in Japan may appear excessive, they must be viewed with the consideration that the rituals and mannerism surrounding packaging phenomena has a deeper acquaintance to societal customs. Lastly, though at a glance, Japanese packaging and sustainability seem to be contradictory, because the notion of packaging in Japan holds such a heavy weight in its culture, it has the potential to become virtually synonymous with sustainability.

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Keywords : Packaging, Sustainability, Culture, Japan, Multimethod, Anthropology

## **ACKNOWLEDGEMENTS**

I would like to acknowledge and express my deep gratitude to the following people for supporting me throughout this thesis:

- Markus Joutsela and Peter McGrory, for their extensive guidance
- Interviewees and participants for kindly taking part in this study
- Family and colleagues, for their support and encouragement

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## I. INTRODUCTION

### 1.1 BACKGROUND

It is currently the year 2020, and the climate of this planet is changing. The imminent threat of climate change not only jeopardizes the future of the planet, but also human activity and production to which economic activity is based (Woetzel et al., 2019). Careful attention, swift action, and seamless collaboration transcending nations and governments are required to overcome this unprecedented peril (Guterres, 2019).

Japan is an interesting case to look at through this lens. A rich history coupled with economic breakthrough post World War II, it has become one of the leading countries not only in terms of economic success (Ishii, 2019), but also a leader in pushing for agreement in climate change policies in international coalitions like the G8 (Shinoda, 2019). This leads to a critical dissimilarity in the country's attitude and actions towards the environment.

On one hand, Japan is very proactive in environmental conservation. There is even a Japanese vocabulary called *Mottainai*, a word specific to the concept of “feeling guilty” for wasting something still good for use (Hawken et al., 2013). Nearly every local municipality in Japan has rigid recycling policies set up, and citizens are willing to cooperate (Brown, 2013). The Kamikatsu town of Tokushima, where they aim to produce zero waste by recycling garbage into 45 categories (Fukue, 2019), is a good example of the citizen's devotion to recycling and decreasing waste.

On the other hand, numerous articles present the country's favor for excessive material use. The Nikkei Asian Review points out Japan as the “second-biggest producer per capita of plastic waste” and its sustainability awareness lagging behind, compared to other nations (Imahashi et al., 2019). As the 12th goal of the Sustainable Development Goals aims to reduce consumption (United Nations, 2019), it advocates to cut down on the quantity of packaging material - consume/use less to save resources. These instances of excessive material use seem to inherently contradict the topic of sustainability.



A specific example of this conundrum, is the amount of packaging that comes along with purchasing a high-end confectionery in Japan. For instance, a box of cookies may force one to unwrap layers of paper and vinyl to reach the final snack. To the modern Japanese consumer, this is natural, often a sign of assurance that the product can be trusted; they would expect no less. Another reason behind the packaging is the issue of hygiene. An “individual” plastic packaging inside a bigger packaging makes the product more hygienic (because one can be certain that nobody has touched the food while stocking the shelves in the store for example). Aside from quality and hygiene, the culture of gift-giving also has a heavy weight on the traditions of packaging customs in Japan. To wrap things elegantly and in layers, are physical displays of respect. The Japanese notion for packaging has a much deeper and intricate denotation than that of the Western term “to pack”.

Sustainable or not - the riddle exists in the almost opposite realities seen in Japanese packaging practice. This led to an initial wonder - if more volume in packaging (and waste) is demonized, would the practices in modern Japan be considered not sustainable? And if so, how can Japan take a step forward in the topic of sustainable packaging?

### A Mini-experiment with Colleagues

In order to investigate my initial wonder, in the earlier stage of this research, I conducted a test with two colleagues whom I had been studying with at Aalto University. Both of them are not from Japan; one had previously travelled to Japan, and one has never been. With the high-end confectionery that I had brought back from Japan, I asked them if they could cooperate with this mini-experiment; specifically, if I could observe and document their response while they opened the packaging. They gladly accepted. This study was not exhaustive, nor was it done with controlled variables (they were each given different confectionery). Instead, the study was meant to quickly get first hand knowledge and response from people who rarely come into contact with Japanese packaging - a fresh voice, in a sense. Their “unboxing experience” was recorded on video, with me as a silent observer. Here are some of their remarks that stood out:

#### Remarks from student A:

*“It’s really nicely packed”* (holding the product before opening)

*“Jesus”* (looking at more packaging after taking off the external wrapping paper)

#### Remarks from student B:

*“I really like the packaging, actually”* (holding the product before opening)

*“It’s literally like opening a new (smart)phone box”* (trying to open the lid)

*“The amount (of packaging) is super too much for a biscuit like this”* (holding the biscuit)

From the two mini-experiments that I conducted with my colleagues above, I gathered that the packaging could be interpreted as excessive, therefore possibly conflicting to sustainability, at least from a non-Japanese vantage point. The participants were both impressed with the quality and care that was given into the packaging, but their responses exhibited awe and wonder as to why so many layers of packaging were applied to the actual product. Although they gave me no further insight to what the underlying reasons were, nor to what should happen with the packaging in relation to sustainability, it reassured me that there are clearly two different forces that were looking in different directions. The takeaway from this experiment was that this thesis could be about understanding those forces, and explore ways in which they might look in the same direction (Figure 1).

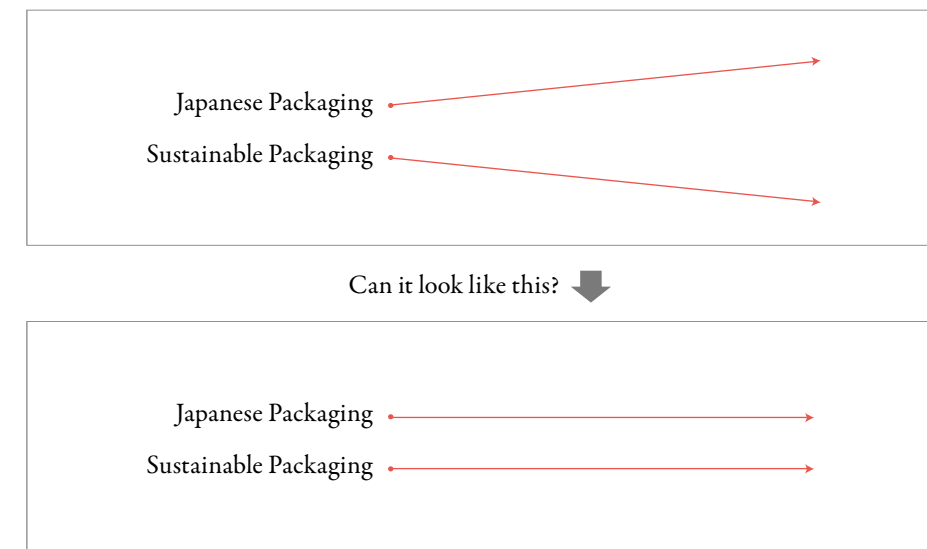


Figure 1. Juxtaposition of forces looking in different directions

## Sustainability as a Wicked Problem

Sustainability, with regards to the environment, albeit being an important topic in the era that we live in currently, is simultaneously an ambiguous one. One “solution” almost always has a counter reaction (Abboud, 2019). Electric vehicles need electricity (which emits carbon), paper instead of plastic still requires manufacturing of the paper (which may use virgin natural resources), cotton bags need an immense amount of water to produce, and delivery of goods require transport (which again, emits carbon). The list goes on. Although there is no silver bullet to any solution for such complex problems, this does not mean that humanity can mitigate its efforts for sustainability.

## The Contribution

The objective of this thesis is not to criticize the consumption norms in Japan, or condemn issues that present themselves within the supply chain, nor is it to offer a single solution to a single segment of the big picture problem in the entire packaging phenomena. Instead, it is about uncovering the historical, cultural, social, and the political factors that comprise the current setup of packaging in Japan, and identifying the gaps with sustainable thinking in the world today. From first hand data through interviews from stakeholders – expert packaging designers, a packaging manufacturer, and a collective mindset audit on ordinary Japanese consumers, the thesis also synthesizes a proposition on what future there is for the country and culture - a scenario in which culture and sustainability are in harmony. Thus, the contribution of this thesis is new knowledge by closing the gap in the current knowledge (Figure 2).

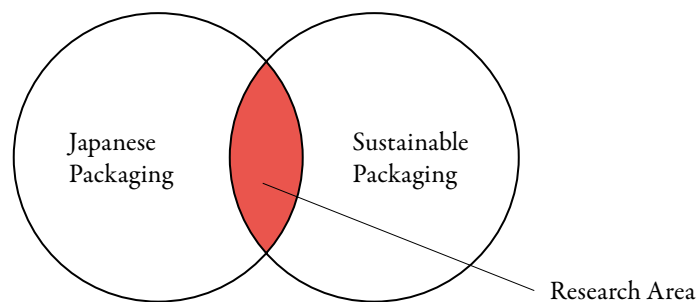


Figure 2. Research area

## 1.2 MOTIVATION

Perhaps one of the most important questions in proceeding with this thesis, is *why* I am doing this in the first place. There are three main reasons.

First of all, this thesis is not sponsored by any business or industry, and does not answer to any specific needs of a particular company. Instead, this thesis originates from my own personal wonders and interests. I have had the privilege of being born in Britain, growing up in the United States, building a career in Japan, and continuing my Master's studies in Finland. I am thankful for my international background, while proud to have my roots in Japan. I am able to speak multiple languages fluently, and therefore have had the chance to get to know many cultures. On the other hand, I have always been haunted by a subliminal anxiety that I know so very little about Japanese culture and its anthropological significance that shapes the country. I wished to therefore use this thesis as an opportunity to dive into understanding more about Japanese culture - not the superficial fashion that modern society may present, but instead a deep look into the ethnographic roots that underlie the nation and its people.

Secondly, I have been exposed to a constant wave of topics regarding sustainability since my move to Finland in the summer of 2018. Never in my life have I seen or heard so much interest and effort on sustainability, let alone topics for theses or subjects of discussion. At the same time I looked at my own waste bin at home in Japan, and realized the vast majority of the content was packaging waste. Understanding the necessity of packaging and the damage I cause with it, the conundrum of these two opposing forces was intriguing; marrying the two became a natural inspiration.

Lastly, and augmenting the previous point, while my thesis explores the conundrum of packaging in Japanese high-end confectionery, in a bigger picture, I wish to draw a bridge between different worlds; from one side I uncover the reason why Japanese packaging is how it is, and from the other, provide future vision on sustainability within the Japanese context. Linking this to the global audience through a design discourse, it is my hope that this thesis not only provides theoretical contribution, but also tangible insight.

## 1.3 OBJECTIVES & RESEARCH QUESTIONS

### 1.3.1 Scope of Research

The thesis covers the issue of packaging design and sustainability in the context of Japanese culture. Numerous research on packaging sustainability and Japanese packaging are done, which are studied in this thesis. Packaging issues in the production process, shipment and delivery process, or the systemic problem regarding packaging, will not be the primary focus in this thesis, although it is mentioned and discussed. Instead, this thesis will focus only on the primary packaging in the context of Japan - the packaging that is done on the end product, line the shelves in the stores, and gets picked up by consumers. Furthermore, the thesis will focus on confectionery, as it makes it easier to conduct research in this setting, as opposed to fresh produce such as fruits and vegetables, which have a much shorter time cycle and are impacted heavily by numerous other factors like weather, production, and supply chain complications.

### 1.3.2 Research Questions

The objective of this thesis is to answer the following three questions.

1. *What historical, social, and cultural factors shape the current state of Japanese packaging? How does it juxtapose with the realm of sustainability today?*
2. *Does Japanese packaging for high-end confectionery pose a challenge to sustainability?*
3. *Can Japanese packaging for high-end confectionery be in sync with an increasingly sustainable world, while staying true to the socio-cultural values of Japan? If so, how?*

The first research question is explanatory, and the second and third are exploratory (Creswell et al., 2016). Figure 3 visualizes the sectional division of the research methods applied to each research question that this thesis aims to answer. The methodology, details of each method, the rationale for using them, and the tangible applications of the execution are elucidated in the Methodology & Method chapter.

#### Theoretical study

##### Research Question 1

What historical, social, and cultural factors shape the current state of Japanese packaging? How does it juxtapose with the realm of sustainability today?

- Knowledge gained
- Gaps identified
- Questions crystalized

#### Field Research

##### Research Question 2

Does Japanese packaging for high-end confectionery pose a challenge to sustainability?

##### Research Question 3

Can Japanese packaging for high-end confectionery be in sync with an increasingly sustainable world, while staying true to the socio-cultural values of Japan? If so, how?

Figure 3. Formation of the research questions

### 1.3.3 Structure of Thesis

This thesis is formed chronologically, where the previous research and knowledge gained, influences the following segment. As a whole, it aims to crystalize the context, cultural history, trends, and different perspectives that come into question when talking about packaging. A base of knowledge on Japanese packaging and sustainable packaging is laid out through reviewing existing literature. The empirical research follows, through a survey and interviews with stakeholders immediately surrounding the topic of packaging design. As synthesis, I connect the dots and draw the future of Japanese packaging.

**Chapter 1** is this chapter, declaring my research objectives, motivations, and background information.

**Chapter 2** is theoretical study, focusing on two main blocks - Japanese packaging and sustainable packaging.

**Chapter 3** explains the methodology and methods of empirical research.

**Chapter 4** takes in the knowledge gained from the theoretical study, and examines it through empirical research. The empirical research itself is done in three main segments. The first one is rapid cultural calibration, utilizing action-based observation in order to experience the phenomena first hand. The second is quantitative research with a survey to 230 Japanese consumers. The third is interviews with stakeholders, who are professional designers, and a company that manufactures packaging. All the descriptions of data collection and analysis are also done in each respective chapter.

**Chapter 5** synthesizes the findings from the theoretical study and the empirical research done in Chapter 4.

**Chapter 6** concludes the thesis, followed by the reference list and appendices.

### 1.3.4 What This Thesis Will Not Do

This thesis is committed to anatomizing the meaning of packaging in Japan, and what future there is for the phenomena. Sustainability itself is a convoluted matter, and therefore the following points will not be addressed in this thesis:

- This thesis does not address the bigger issue of climate change as the main topic itself, although the relevance and imminent necessity of taking action is noted as the overarching theme.
- This thesis does not examine packaging for products other than Japanese high-end confectionery, such as packaging for vegetables, fruits, low-end snacks, or other daily commodities.
- This thesis does not take one specific brand or type of confectionery as a case study.
- This thesis does not investigate material or chemical composition of the packaging, although a few examples are mentioned to illustrate sustainability trends and innovations.
- This thesis does not claim sides on whether plastic, the use or reduction thereof, is good or bad, although both merits and demerits of its use are mentioned.
- This thesis does not offer a silver bullet solution to the life cycle of packaging, nor does it present a check list of actions for sustainability.

It also must be noted that this thesis does not demonize Japanese packaging as a whole. Acknowledging that examples like MUJI minimize their packaging material for ecological and economical reasons, they will not be the subject of this study.

## II. THEORETICAL STUDY

### STRUCTURE OF THE THEORETICAL STUDY

The theoretical study is aimed at laying down the necessary background information in order to proceed with this research. It is divided into two big blocks. The first block focuses on Japanese packaging - the background information of Japanese packaging as it is today. In a sense, it explains the forming of the phenomena (Creswell et al., 2016). This block contains three sub-blocks, which are 1. Cultural Anthropology, 2. Political Influence, and 3. Modern History. Together, these three aspects explain the phenomena in question. The second big block is about sustainable packaging and efforts in the world today. This block is divided into two sub-blocks, in which the respective topics are 1. Definitions of Sustainability, and 2. Sustainable Packaging. Lastly, the two big blocks are seen from a bird's eye view, and synthesis is formed. Although ample amount of research on packaging is done and it is impractical to read everything (Azzi et al., 2012), literature in both English and Japanese were reviewed. The selected works were reviewed based on the relevance to the topic that they provide substantial knowledge, but simultaneously leave enough space for synthesizing ideas and exploring further questions.

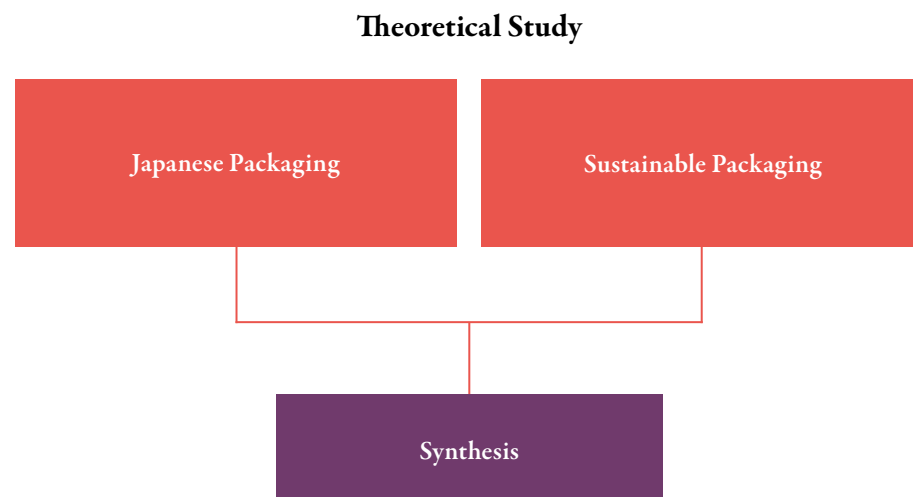


Figure 4. Structure of the theoretical study

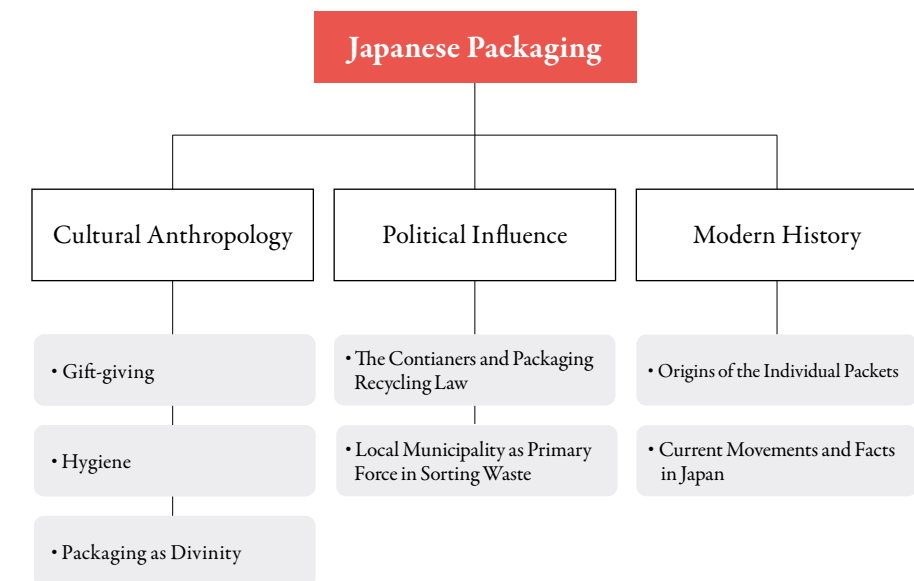


Figure 5. Building blocks of Japanese packaging

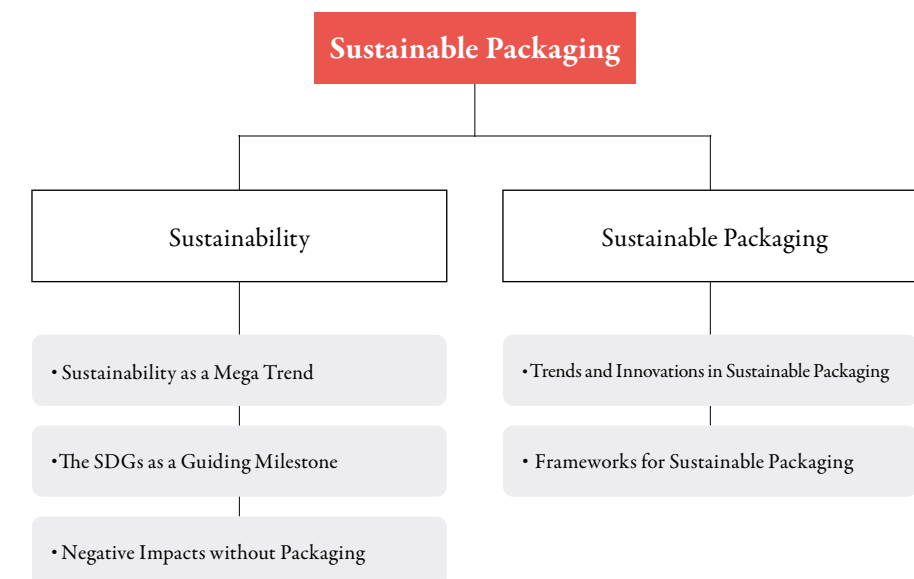


Figure 6. Building blocks of sustainable packaging

## 2.1 CULTURAL ANTHROPOLOGY

The history and culture of a national entity come hand in hand, and for Japan, it is no exception. When researching these matters, common themes kept repeating themselves. This study identifies three important cultural anthropological factors that shape the packaging culture in Japan - these are: gift-giving, hygiene, and packaging as divinity. Not one of these factors are mutually exclusive - they are all interconnected to each other, influencing and being influenced (Figure 7). Gift-giving is trickled down from the concept of packaging as divinity, and simultaneously hygiene is emerged from the practices of packaging holding sanctity. At the same time, hygiene is imperative to the discipline of animism - that gods exist everywhere - where Shintoism was (and still is, to larger extent) the underlying belief of the people (Public Affairs Headquarters for Shikinen-Sengu, 2013). It is difficult to affirm which of the three components came first or last - it is more realistic to think that these materialized almost simultaneously, and all of them developed into the characteristics of the culture over a long period of time.

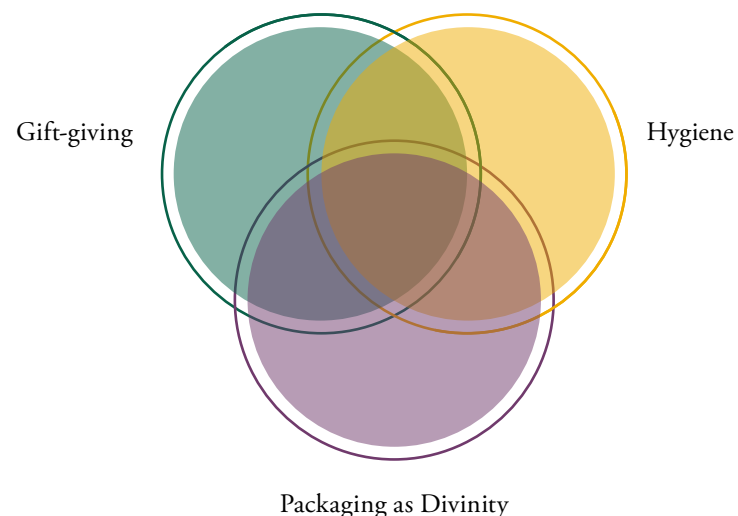


Figure 7. Three forces intertangle in the composition of Japanese packaging

### 2.1.1 The Gift-giving Culture

#### 2.1.1.1 The Socio-cultural Significance of Gift-giving

Giving and receiving gifts are an enormous part of being a member in the Japanese society. A neighbor might casually drop by to “say hello” and bring a pack of small cookies or snacks, just because they had some left over. It is also very common for people to bring back souvenirs from vacations to their workplace, or to their friends and families, usually in the form of something edible - mostly snacks that last longer (than raw fruits, for example) and do not go bad during the transit. A conversation about the trip may unfold over eating these snacks that were brought back from the vacations. Although the recent progression of individualism and metropolitanism reduce the prevalence of gift-giving, the ritual is still very much present in Japan, and is basically impossible to opt out of these rituals, even in extremely urbanized settings (Morsbach, 1977). In essence, these gifts are procedures to maintain relations in one's social circle - an expression of gratitude to those who have done one a favor, as it usually occurs just by belonging to the group. The sharing of joy and sorrow usually entails, and gift-giving also accompanies in each of these moments. In other words, gifts are a means to further deepen and strengthen the bond between people (Nukada, 1977).

In Japan, this ritual of gift-giving is not a random interchanging of objects, but instead, is a quintessential act of exchanging empathy on specific occasions (Itoh, 2011). Every year, during the *Ochugen* (summer season gift) and *Oseibo* (end of the year gift) times, gifts criss-cross all over the country, and reciprocations are sent. Stanford cultural anthropologist Harumi Befu, counts 35 different terms for gifts in the Japanese language, such as “funerary gift,” “farewell gift,” “introductory goodwill gift,” and “gift brought back from a trip” (Befu, as cited in Morsbach, 1977). These terms are still in use, even in the Japanese life today. This systemic ritual of gift-giving had been established in the samurai society in the late medieval period (Minamoto, as cited in Itoh, 2011). Because the Japanese still value face-to-face relationships in small communities, contrasting to strong individualistic values in the West, keeping these relations through ritualistic means are more automatic than intentional (Morsbach, 1977).



### 2.1.1.2 *On* and *Giri*

So exactly why is gift-giving such an important ritual in Japan? Aside from the socio-cultural importance of upkeeping relationships in the society, a deeper look into the civil formation presents us with interesting facts about the country. A prominent social proposition is the value-driven human relation concepts of *On* and *Giri*, that help understand why gift-giving is so important in Japan (Befu, 1968). Befu especially emphasizes *Giri* as the strongest driving force in the gift-giving culture, and the catalyst to answer why the acts of “giving” and “giving back” are so crucial in the society:

*Giri is a moral imperative to perform one's duties toward other members of one's group. Gift-giving falls squarely in the sphere of giri; one is morally obligated to give a gift when custom demands it. Giri is bound up with the institution of gift-giving in another way; namely, reciprocation. To the extent that one man's relation to another in Japanese rural society is defined in reciprocal terms, in which the give-and-take of social relations should be fairly rigidly balanced, the concept of giri evokes in the tradition-minded rural Japanese the obligation to reciprocate. Since gift-giving is an act of giri, and since giri requires reciprocation, a gift naturally calls for a return gift. (p.450).*

According to Befu, the institution of gift-giving is balanced by the act of returning the gift. This kind of reciprocity is seen usually in the customary donation of “incense money” (*Koden*) at funerals, or “celebratory money” (*Goshu-gi*) at weddings (Befu, 1968). In the case of the “incense money,” it is usual that the family of the deceased keeps a careful record of each donation, and a certain return is made to the giver. He further explains that these gift-giving rituals may be given for a favor done, or vice versa, but in situations where the relationship is hierarchical, say, a doctor cared for a patient and the patient recovered, the “thank you gift” that the patient makes is already seen as the reciprocation itself, and further reciprocations (from the doctor to the patient) will not be made. How well and timely a person properly makes these reciprocals, are important measures of social character in Japan, and can construct or destroy one’s reputation by the surrounding society (1968).

Cultural anthropologist Ruth Benedict analyzes that *On* is an obligation that incurs passively. One can receive an *On*, or one can wear an *On*, and so on. There are five different types of *On*, which include *On* from the Emperor, parents, lords, teachers, and all contacts in the course of one’s life. When one receives an *On*, one returns these obligations to the person who had given it as reciprocals - that is the *Giri* that one vows to keep. She explains that the concept of *Giri* as debts to be reciprocated with “mathematical equivalence” to the favor received, and must be done within a certain time (Benedict, 1989). It must be noted however, that this strictness has softened over time, and people living in the modern era (as of 2020) will regard “mathematical equivalence” to be somewhat far-fetched. A common and more widely used measure is “half the price” of whatever favor that was done. For example, if one receives congratulatory money for marriage, a “thank you gift” about half the value of the money will be returned. Nowadays, it is common that these gifts are catalogue gifts, in which the receiver can select whatever they like from the catalogue.

In short, to the question - why are the Japanese people so keen on giving and reciprocating gifts - the most elemental answer is that there exists an organizational system, guided by the principles of *On* and *Giri*, where the Japanese value the conservation of social membership and returning favors. This philosophy is unique to Japan, and oftentimes poses questions to those who are not from Japan. Among all moral obligatory rituals in the world, *Giri* is the “one of the most curious” (Benedict, 1989). Gift-giving comes into play as instruments of social maintenance. Although modern people in Japan may not necessarily be conscious about the deep history of this custom, these rituals and beliefs are passed down from generation to generation, trickling down to daily actions such as bringing back a souvenir to people’s social circles.

### 2.1.1.3 Supernatural Beliefs in Gift-giving

Anthropology suggests that another origin of gift-giving may lie in the traditional belief in supernatural forces in the indigenous Shinto religion. In the old days, the yield from the harvest was offered to the gods first, and then shared with the humans. This notion is still very much alive. For example, rice, fruits, and other offerings from the harvest are dedicated to family ancestors at the household altar, if there is one. The making of mochi (sticky rice cake) during the New Year is a ritual to thank the gods and offer the harvest

to them first. Such offerings are historically related to *Naorai*, where gifts were dedicated to gods, and these gifts were returned by gods, so that humans can acquire the divine power (Befu, 1968). The pervasive custom in Japan of giving the first crop of the yield to neighbors and relatives is also derived from the past practice of offering the first harvest to the gods, and thereafter sharing them among the community. The word *Otoshidama*, which nowadays refers to the New Year's present from adults to children (usually money), also originally denoted offerings to the god of the New Year, which were later eaten by men as the god's gift (Befu, 1968). In short, the belief of giving and receiving of divine power through food commensality, whether it is done upon oneself or to neighboring others, is one of the deepest roots of the importance of gift-giving in Japan.

This belief in infusing spirit into the gift, becomes real in packaging in the form of *Noshi* and *Mizuhiki*, and both are still very much in use today. When giving a gift to someone, especially in any of the “official” cases like the 35 cases mentioned above by Befu, it is a tradition to put a *Noshi*, and tie it with *Mizuhiki* (Figure 8). *Noshi* is an intricately folded decoration that goes on top of the gift, which traditionally used a strip of dried abalone. *Mizuhiki* is a ceremonial act of injecting a spirit into the packaged object, by physically tying the knot of two decorative strings (these could be subdivided into more, depending on the decoration) on the package (Matsuda, 2008). In modern times, a printed sheet of paper containing both *Noshi* and *Mizuhiki* is common and formal enough (Befu, 1968). Examples of the printed paper can be seen in Image 12, where I buy gifts in research. Like the art of wrapping, the art of tying was equally condemned as a way to connect with the gods.

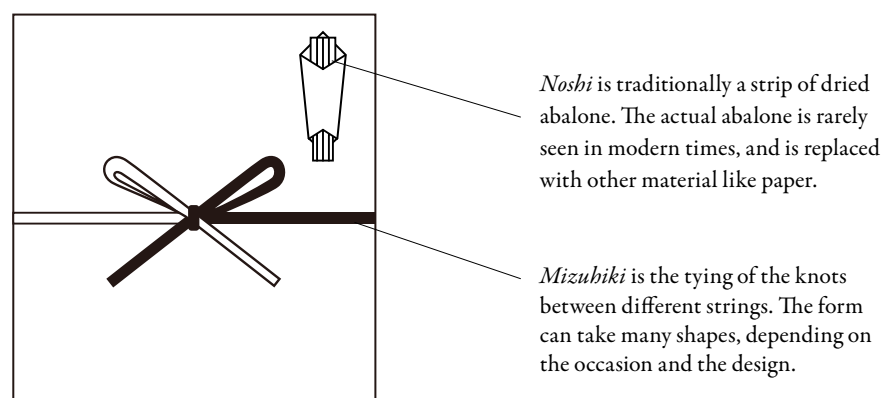


Figure 8. *Noshi* and *Mizuhiki*

## 2.1.2 The Importance of Hygiene

The Japanese' preference for hygiene and cleanliness is a cultural factor that cannot be ignored in this thesis. Like stated in the introduction, packaging in Japan acts as a sign of hygiene, on top of basic functionality. The perception of hygiene in Japan, however, is not necessarily physical - it is simultaneously mental. As Ohnuki-Tierney et al. state, the full explanation of contemporary hygienic concepts in Japan cannot be covered in biomedical terms, and past publications have largely focused around the concepts of purity and impurity in religious terms (1984). In explaining the importance of hygiene in Japan, examples of daily rituals are presented, where the appreciation for cleanliness can be seen. This section presents three everyday examples where hygiene is taken as a serious matter.

### 2.1.2.1 *Genkan* : a Place that Divides the Outside and Inside

The Japanese regard the outside as filthy, and the inside as clean. The most evident example is the consistent custom that can be seen in Japanese homes, where shoes are always taken off at the entrance. Shoes are almost never worn into the house, and one may seriously offend the inhabitant of the house by stepping in without taking their shoes off. However, this seldom happens, as in a Japanese home, there will always be an architectural feature called *Genkan*, a space in the entrance usually right after opening the door, specifically designed for taking off shoes, and leaving the shoes there. Other common items such as umbrellas, which may touch the ground while one carries them, are often kept in the *Genkan* as well. The point of this space is to leave whatever touched the ground (which is filthy), and not carry them inside the house (which is clean).

The term *Genkan*, literally means "a barrier or a gateway leading into a deep and sacred road" (Asakura as cited in Matsuda, 2013). This is an architectural aspect that may be specific to Japanese architecture, no matter the social class of the house, nor the age of the house. As photographed in Image 1, the area will most likely have a different material used, and will be one or two steps lower than where the rest of the house begins. In this way, a person will always take off their shoes before stepping into the house. A shoe rack is often designed to be a part of it, for the inhabitants of the home to store their shoes (seen on the left side in the image). Because the notion that the ground and the outside





Image 1. Japanese *Genkan* where people take their shoes off (Anonymous, 2020)

carry dust, dirt, and other filth, is prevalent in Japan (Ohnuki-Tierney et al., 1984), it is imperative to make the distinction where the outside ends, and where the inside starts. This divide is physically clear, and binary action - shoes on, or shoes off - is afforded to whomever enters the house. Though Westernization has changed Japanese style of living in so many ways including architectural styles, even the tiniest apartments have a *Genkan* (Ohnuki-Tierney et al., 1984). This policy of taking off shoes is not limited to Japanese homes. It can be observed in some *Ryokan* (a traditional Japanese style hotel), elementary schools (children usually wear specific slippers), and some traditional restaurants as well. The difference is clear when one compares this to the Western style dwellings, where rooms start immediately after the entrance. There is rarely any area specifically designed to take off shoes. The act of taking off shoes is an important and symbolic division, dividing the outside and the inside. In comparison to many Western housing traditions, the culture of hygiene is evident. Ohnuki-Tierney et al. explain that this custom of taking one's shoes off before going "inside" from the "outside" remains a cardinal rule in Japanese society (1984).

### 2.1.2.2 Cleaning as a Part of Everyday Life

In the last weeks of the calendar year, homes, schools, and businesses all over the country scramble to complete their end of the year cleaning - the *Oosouji*, which literally translates to "the big clean." It is an important and monumental activity that people do - cleaning out their life - homes, office spaces, classrooms, and so on. This big clean symbolizes the Japanese mindset for cleanliness, and prepares everyone for the new year to commence a fresh start. Even in everyday school life, elementary school children usually have a period of cleaning at the end of the day, where they must clean their classrooms using brooms and rags.

### 2.1.2.3 Cleansing before Going in the Hot Spring

In Japanese hot springs (*Onsen*) and public baths, there are strict rules that everyone follows. In the *Onsen*, there will usually be a big tub (depending on the facility there could be more than one) and a space for people to wash their bodies, which are usually equipped with rows of shower stations. Before jumping into the nice hot tub, each person must wash off their bodies at the designated wash area, in order to get rid of their dirt and dust, an act of cleansing one's filth before contaminating the sacred communal bath. The tub therefore, even though it is shared by numerous people, stays clean and hygienic.

The three examples - *Genkan* (entrance area), *Oosouji* (the big clean), and the *Onsen* (hot spring) - imply that the issue of hygiene is deeply rooted into the Japanese culture on a metaphysical level, and can be spotted in everyday Japanese activities. The three cases do not cover the phenomena of hygiene exhaustively, but help comprehend the preference for cleanliness that trickles down to packaging in Japan.

### 2.1.3 Packaging as Divinity

Though civilization and the rapid progress of modernization engulf the world and the nation, there is a special sense in Japan where objects are treated with care and attention. This phenomena may come from the Shintoism beliefs where deities reside within nature - in the clouds, the mountains, the rivers (Figure 9) - everywhere at once (Hara, 2014; Public Affairs Headquarters for Shikinen-Sengu, 2013). The belief extends to objects, as the Japanese view the world in which not just living entities, but also inanimate objects are held to be alive. That is called animism (Takashina, 2015). Thinking about animism - the notion of spirituality existing everywhere including objects, may help understand why packaging is treated with such extraordinary care.

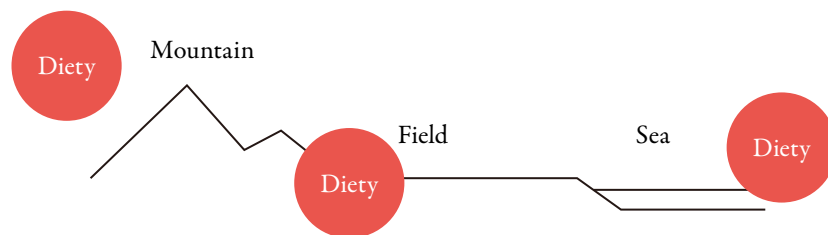


Figure 9. Deities exist everywhere (Adaptation from Hara, in Menegazzo et al., 2014)

Renowned researcher of traditional Japanese packaging, Hideyuki Oka, fears that packaging today has merely become a technique for selling - a tool to trick customers in the advertising industry that constitutes a big business. He states that packaging is basically something to be discarded, and nothing else (Oka, 2011). Aside from his concerns, he analyzes the beauty of traditional Japanese packaging came into shape has its roots in the art of sacredness:

*This is a result of considering wrapping and packaging as a sort of sacred ritual. I have already observed that since ancient times the Japanese have regarded all things as being of value [...] The act of packaging an object becomes, then, a ritual of purification, of distinguishing the contents of the package from all similar objects that have not been purified. (pp.10-11).*

Nukada also mentions something similar to this, in which the act of packaging signifies something more than simply wrapping an object. He states that the meaning of packaging is a "display" that separates the two realms of "the inside and the outside," or "the holy and the vulgar" (Nukada, 1977). The resonance to the *Genkan* (the space to take off shoes in Japanese homes) mentioned above - the binary divide of the in and out - can be observed here in the art of packaging.

Hence, the art of packaging, along with many other actions like tying, is a highly sophisticated and sacred act that has its roots in the customs of Shintoism, the indigenous religion of Japan. Since the Heian period in the 700s when aristocratic and warrior society existed, when a gift was given to a person, the way of packaging it expressed not only the value of the object inside, but also the value of the person who brought it. The splendor and variety of the ceremonial packaging at that time fully demonstrate the uniqueness of Japan (Nukada, 1977). Established craftsmen gathered their experiences and techniques to devise their own ways of packaging, especially on "how to package the item beautifully." In other words, packaging came to have a figurative and symbolic value, far beyond the practical range of packaging and the other functionalities (Nukada, 1977). Takaoka et al. explains packaging as a communication tool that conveys happiness or sympathy - a tool that has been perfected not to convey thoughts through words, but through form (Takaoka et al., 2011).

#### 2.1.3.1 Dissecting the Word for Packaging



Let us now look at the characters that construct the term packaging in Japanese. The verb "to pack" (or, wrap) is written as 包む. The first letter 包, a *kanji*, is an imported Chinese character. The origin of this letter is a pictorial representation of a mother embodying a baby inside her womb (Figure 10). ㇏ (hou) is the side-on view of the person. ㇏ (shi) is the fetus (Takaoka et al., 2011). So the connotation to wrap may seemingly be a simple action of giving an object an outer layer of protection. The denotation, in the Japanese

Figure 10. The pictorial origin of "to pack" (Adaptation from Takaoka et al., 2011)

language, is a more sacred act - an embodiment of something precious that is inside. And in the human socio-biological context, what else can be more loving, sacred, and full of care? The very concept of packaging, therefore, is closer to a divine act, rather than applying simple layers of protection as a functionality.

### 2.1.3.2 Interpretations of Japanese Packaging as the End Product

French philosopher Roland Barthes observes packaging in Japan as the product itself. He states that the functionality of packaging goes beyond the notion as protection to the object, and itself becomes an object (Barthes, 1982). The semantic purpose of Japanese packaging makes the container the end purpose, and not what it contains (Anderson et al., 1991). Oka states that in the case of traditional Japanese packaging, the role of craftsmen also played an important part. These craftsmen departed from the conventional functionality of packaging, and devoted themselves to perfecting the art of packaging. He explains, “they achieved a level of competence so high as to constitute a unique peak in the history of packaging. This was the beginning of packages as works of art, as products that often had more charm and more value than the actual contents of the packages. Packaging had become an end in itself” (Oka, 2011).

### 2.1.3.3 Packaging Phenomena Seen Beyond Confectionery

There are other areas in modern Japan where the people express their preference for packaging - one of them can be seen in book covers in Japan. Not the one that comes with the books, but an additional layer of paper that wraps around the book, for sanitary and (mostly) privacy purposes. Often printed with the logo and name of the bookstore (where the person bought the book), they can often be seen on books held by people on public transportation like buses and trains. According to the *Shohi Yuko Kyokai* (Book cover lovers association), some say that this custom is an example of excessive packaging, as books already have covers on them (Shohi Yuko Kyokai, 2017). However, they declare that these book covers are a respectable “packaging” culture; the culture of “packaging” standing for ceremonious gift-giving that we saw earlier, as well as protecting the books from dirt and scratches. Because of that, this book cover culture is a service that is rarely found in other countries, and seems to be fresh to foreigners who came to Japan (Shohi Yuko Kyokai, 2017).

## 2.2 POLITICAL INFLUENCE

The previous chapters looked at the anthropological factors that shape the packaging perception in Japan; religious beliefs and organizational systems form the rituals of packaging that is still carried on in Japan today. The concept of packaging goes beyond the notion of an item for protection and storage - the packaging is the product itself, if not more. If packaging is so important, then one can imagine the sheer amount of waste that the nation must be producing. This leads to a question, if packaging is so important, are there any policies that regulate the flow of packaging in Japan? This chapter takes a closer look at the policies and regulations that are currently in place.

### 2.2.1 The Containers and Packaging Recycling Law

In April 2000, a new law, called the Containers and Packaging Recycling Law, was put in force in Japan at a national level, that forced packaging manufacturers to manufacture packaging material that can be recycled. This applies to packaging at all levels of a product, including the outer packaging, all the way to the individual plastics that envelope all the inner snacks. Specific guidelines were installed to guide the manufacturers to visualize and print (on the box or plastic) what the material is, and how it should be recycled. For example, symbols stating whether the material is paper based or plastic based, must be printed on all packaging, thereby allowing the consumers to recycle properly (METI, 2003). The origins of this new set of laws was largely motivated by the concern that unless Japan did not reduce the amount of household waste, the landfill designed to hold the waste will have filled up within 10 years. Coupled with the fact that Germany had already installed a similar law in 1991, and the fact that 60% of household waste in Japan consists of packaging garbage, there was a need to decrease this significantly (The Japan Containers And Packaging Recycling Association, 2019). According to the Ministry of Economics, Trade, and Industry of Japan (hereon listed as METI), the purpose of the Containers and Packaging Recycling Law is to clarify the roles of waste, particularly containers and packaging, in regards to consumers, local municipalities, and businesses, with the aim of ensuring proper management of waste and effective use of resources. The law provides for the collection and recycling system

in which municipalities take charge of carrying out sorted collection of containers and packaging (sorted and discarded by consumers) and businesses take charge of recycling such collected containers and packaging (METI, 2003). In this set of laws, “containers” are defined as things in which products are contained (including bags) and “packaging” is defined as things used to wrap products. This law defines both of these terms as “containers and packaging for commercial products, which become unnecessary when the said products have been consumed or [...] removed from the products” (METI, 2003).

More recently, in December 2019, METI has announced the passing of an amendment to the Containers and Packaging Recycling Law, that forces plastic bags distributed (such as in supermarkets, convenience stores, or any retail stores) in Japan must be charged with a fee. This amendment becomes effective on July 1st of 2020, and will be applied nationwide (METI, 2019). This move is expected to decrease the amount of plastic bag waste by a dramatic amount. Plastic bags that are expected to last longer and can be used multiple times (which have a thickness of over 50 micro mm), or bags that use 100% marine biodegradable plastic, are excluded from this amendment.

### 2.2.2 Local Municipality as Primary Force in Sorting Waste

Contrary to criticism against the country's obsession with packaging waste (Imahashi et al., 2019), there are opinions stating Japan does a good job in sorting waste. This is largely due to the function of *Jichitai* (the smallest local municipality unit) in Japan, as the primary force of ensuring that waste is sorted, and is collected in a manner that ensures it. Because waste sorting is primarily up to the municipalities, there are variations in what is sorted and what is not. For example, in Naka-ward in Yokohama city, the rules state that metal objects, even including the staples, must be sorted. That differs from the rule in Shinagawa-ward of Tokyo, where staples can be put into mixed waste. Japanese design and anthropology expert Azby Brown describes that citizens of the *Jichitai* are willing to devote the attention and effort required to make the waste sorting work as designed. Most municipalities require waste to be separated into different categories, assuring the sorting. He describes that the reason why the systems work lies in the strong community relations in the *Jichitai*. Each neighborhood has a designated collection point for waste, where collection occurs on a scheduled regular basis (Brown, 2009).

## 2.3 MODERN HISTORY OF JAPANESE PACKAGING

### 2.3.1 Origins of the Individual Packets

When looking at confectionery bought in Japan, one key component that differs quite often from the West, is the existence of the individual packets inside the bigger containers or boxes. Not only limited to high-end confectionery but also prevalent to low-end everyday snacks, one will almost always find a single snack content wrapped in its own piece of plastic, inside the whole bag/box. Compare this to the Western custom, where individual packets, if used, are applied only in essential functionality, where the item really requires to be wrapped individually. Many people from both in and outside of Japan express their curiosity as to why these individual packets are applied in Japan. This frequently rises as one of the items that may make people feel that Japan has a favor for excessive packaging. This thesis also looks into the reason and background of the individual packets in Japan.

The following images compare similar confectionery (dry cookies) from Japan and Spain. Both items are found in rather high-end department stores where customers will most likely purchase these as gifts.



Image 2. Confectionery having individual packets are common in Japan



Image 3. Western confectionery have less individual packets



Waste researcher Funaki (2003) explains that in the old days, *senbei* (Japanese traditional rice crackers) were only contained in one outer bag, and candy was wrapped very simply. However, recently, all the rice crackers and candy are wrapped in plastic, made of polyethylene or polypropylene. Furthermore, trays (dishes) such as polystyrene are often placed beneath the rice cracker. Funaki calls such double packaging of individual packets and trays "the ultimate over packaging". He declares that this is concerning, as this kind of custom wastes resources and energy, and incinerating these will further contribute to global warming (Funaki, 2003). He discovers that with the spread of POS (point-of-sale) systems in the 1980s, sales information began to flow from retail stores to the manufacturers, driving the popularity for individual packaging in the 1990s. One such information includes items that have individual packets sold better. The increase in individuality lifestyle (i.e. single residents living alone in metropolitan settings) has progressed the demand for individual food. Funaki analyzes that the influence of convenience stores had a significant contribution to the individual packaging. Individual packaging began to spread due to the synergistic effect of convenience stores that competed for convenience, and the POS system synergistic effect (Funaki, 2003).

Another major incident that drove the growth of the individual packets, is the infamous Glico-Morinaga Case that shocked the country between 1984 and 1985. The case is a series of threats against the confectionery giant, Ezaki Glico corporation, and other food and snack manufacturing companies. It started with the kidnapping and ransom of the Ezaki-Glico's chairman Ezaki (who was released after three days unharmed), continuing on to the companies' signature snacks being poisoned with potassium cyanide, and put on the shelves in stores. The threat was released to the public, shaking the country with fear. Concerned that the snacks may be poisoned, people stopped buying snacks by Ezaki Glico. Another confectionery company, Morinaga, along with other food companies, was also threatened during this series of food terrorism. As a result, food company managers realized that a minor terrorist attack could cause damage economically and it could erode consumer confidence in the food industry in its ability to provide safety from food damage (Kanagawa et al., 2014). It is said that these times, the snacks were not enveloped in individual packages, thus making it easier for the criminal to carry out the act. Since then, confectionery manufacturers began to take increased security measures to protect the snacks, even if it meant that the packaging might be excessive.

### 2.3.2 A Note on Hygiene and Packaging Amidst the COVID-19 Pandemic

One interesting point with the food terrorism event above reveals, is the realization and awakening of food safety awareness in Japan after the event. The individual packets became a defacto standard to ensure safety to consumers, and to protect the products from criminal acts. As this thesis is being written, in the month of March 2020, the novel coronavirus disease (COVID-19) is spreading across the entire globe, generating the first pandemic caused by a coronavirus (World Health Organization, 2020).

In light of the spread, citizens all over the world are being advised to socially distance, wash hands, and take care of good hygiene such as not touching common places like door knobs, handrails, and so on. The Harvard Health Publishing states that the virus can survive up to four hours on copper, up to 24 hours on cardboard, and up to two to three days on plastic and stainless steel, and can furthermore transmit if a person touches the contaminated surface and then touching their eyes, nose, or mouth (Harvard Health Publishing, 2020). Amidst the pandemic, this information is quite interesting as it reveals a possibility in the increased awareness in hygiene all over the world. Though wearing gloves in public places like supermarkets is widely debated (Miller, 2020), some shops around the world are requiring customers to wear gloves in stores (Gallagher, 2020).

The increased awareness in hygiene and safety applied to food packaging is therefore plausible. If there are individual wrappings inside the bigger containers, then it is possible that the consumers never physically touch the item that they eat, as they will be able to hold the piece of plastic instead of the content. Of course, they might touch the food or snack if they intentionally do so, but the individual wrappings at least make it possible to only touch that piece of packaging. While the coronavirus is making people more aware of hygiene, it will be critical to follow not only policies and regulations that emerge in the world after this, but also trends and signals that surface in the industry. It is possible to think that confectionery having individual wrappings will become more prevalent in the upcoming years, to ensure good hygiene and food safety.

### 2.3.3 Current Movements and Facts in Japan

The cultural and historical factors that shape packaging in Japan, as well as the policies and regulations that support the recycling of packaging materials after consumption, are elements that explain the past and its influence on the present. Let us now take a look at what is happening on the ground in Japan now, as of the year 2020. What are the facts and figures? How is the country responding to the emerging topic of sustainability? What specific examples of sustainability are there that lead the nation?

#### 2.3.3.1 Statistics from the Japan Ministry of Environment

As Japan is a centralized law-abiding entity that is controlled by government policy, it is beneficial to start by looking at official statistical figures that are announced by the government every fiscal year. According to the Japanese Ministry of Environment, the amount of normal household waste has been going down steadily throughout the past ten years. The definition of household waste, is the waste collected from ordinary collection points in local municipalities (this includes recyclables), and does not include industrial waste.

The data from the Ministry of Environment points out that as of 2017, the latest data aggregated available, the daily disposed waste per person has gone down to 920g/day, as opposed to 1,033g/day, back in 2008. Another set of data indicates that although the total amount of incinerated waste has gone down, the percentage of incineration has increased in the same time frame. The amount of direct landfill has gone down significantly in the past ten years. However, it must be noted that the amount of residue, mainly ashes from incineration, remains consistent, and the percentage of recycling remains steady at around 20% (Japan Ministry of Environment, 2017). Within the recycled waste, 93.4% of steel cans, 92.5% of aluminum cans, 84.8% of PET bottles, 75.1% of glass bottles, and 43.4% of paper is recycled (Japan Containers and Packaging Recycling Association, 2020).

#### 2.3.3.2 Awareness of Ecology and Sustainability in Japan

According to a research done in 2011 by Nikkei Research Institute of Industry and Regional Economy, more than 38% of a total of 531 people (a group of randomly selected male and female citizens of the greater metropolitan Tokyo, between the ages of 20 and 69), selected in a survey said that they would like to decrease the amount of packaging (Sasaki, 2011). In October 2018, Japanese market research company Macromill conducted a survey based research on the topic of plastic waste and consumer mindset. This survey studied a total of 1,000 respondents from their 20's to 60's across Japan. Although this survey does not focus on any category of packaging, it does give a clue of the broader mindset of Japanese citizens, on ecology, their habits regarding disposal, and packaging waste. Almost 87% out of 1,000 say that in their day to day lives, they consciously separate trash according to the category, and almost 70% say they buy refillable pouches for items like detergent.

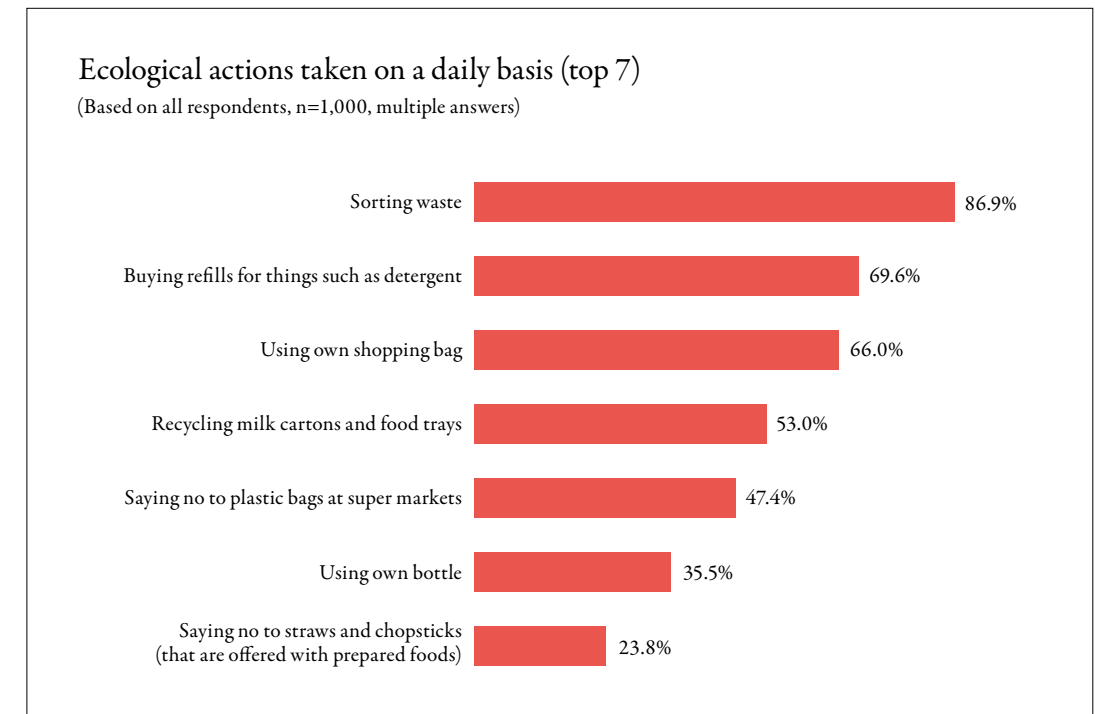


Figure 11. Ecological actions that people take on daily basis (Macromill, 2019)

The next graph visualizes what items the respondents thought were excessive in packaging. Almost 40% out of the 653 respondents said that the individual packets in confectionery are excessive and unnecessary, following cushion, cutlery, straws, and external film.

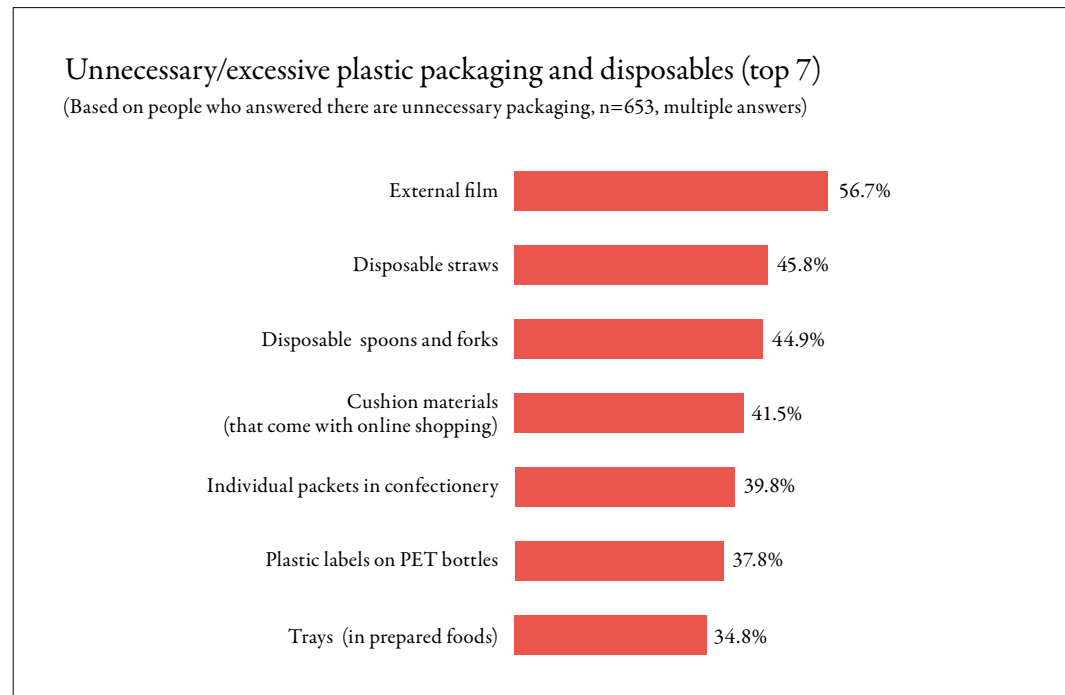


Figure 12. Opinion on unnecessary/excessive plastic packaging (Macromill, 2019)

To the question, “do companies that provide environmentally friendly packages and products have a good image?” a combined total of 80% responded that they agree, or rather agree. To the question, “would you accept environmentally-friendly packages or disposable products, even if it sacrifices convenience?” a combined total of almost 54% said they agree, or rather agree. But to the question, “would you buy an environmentally friendly packaged product even if the price goes up?” the numbers who agreed plummeted - only 36% agreed, or rather agreed. This hints that people may not be willing to sacrifice money out of their own pockets, if eco-friendly packaging costs more to the consumers (Macromill, 2019). The survey clearly reveals that the majority of people who participated in the study are conscious about sustainability, and ecological actions are taken on a daily basis. The challenges for further action is the reality in the cost - if consumers must take the toll, they will be less inclined to make sustainable choices.

### 2.3.3.3 Recent News in Japan Taking Steps to Sustainability

Recent news has been popping up around the topic of sustainability, with companies increasingly cutting down the amount of packaging, and switching materials to those that are more sustainable. In September 2019, Nestlé Japan announced it would be replacing all of its plastic packaging for its signature snack “KitKat” to paper (Nestlé Japan, 2019). The change has already come into effect, and the package is decorated with the statement to communicate that it had gone sustainable, by invoking customers to make origami cranes out of the paper package. Another example comes from the Japanese fashion giant and owner of UNIQLO, Fast Retailing. It has a “plan to reduce the amount of single-use plastic handed to customers at its group stores worldwide, such as shopping bags and product packaging, by 85%, or around 7,800 tons annually, by the end of 2020” (Fast Retailing, 2019). The company has already entirely switched its plastic shopping bags to paper bags, worldwide (Japan Times, 2019).



Image 4. Nestlé Japan’s new paper-based packaging for KitKat

## 2.4 SUSTAINABLE PACKAGING

### 2.4.1 What is Sustainability?

The definition of the term "sustainability" varies largely between scholars, businesses, and governments, also depending on which axis one looks at it, such as "economic," "societal," or "ecological" (Morelli, 2011). Although this study does not participate in the debate of the definition of the term, this study views sustainability from the environmental standpoint in terms of human interaction with the ecosystem (2011).

The German city Hannover, with the holding of the world exposition in 2000, issued a set of guidelines called The Hannover Principles, that address designers, architects, and planners to consider sustainability as a pressing issue in the future world. In the document outlining the principles, architect William McDonough defines sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (McDonough, 2012). Sustainability expert and designer, Aaris Sherin defines the term as the "balanced use of social, environmental and economic capital, so as not to compromise the ability of future generations to survive and thrive" (Sherin, 2013). Activist designer Victor Papanek advocates for design that rejects mass consumerism and design acting as responsible and sustainability in a society challenged by resource scarcity (Papanek, 1985). Architect Buckminster Fuller, analogizing Earth as a Spaceship travelling in space, claims humanity has abused the system too much for successfully regenerating life on this spacecraft (Fuller, 1969). His point in viewing Earth as a Spaceship is to illustrate that resources are finite, and that once compromised, they cannot be regained. Dr. Ben-Eli, a student of Fuller at the Buckminster Fuller Institute, extends the definition as "a dynamic equilibrium in the processes of interaction between a population and the carrying capacity of an environment such, that the population develops to express its full potential without adversely and irreversibly affecting the carrying capacity of the environment upon which it depends" (Ben-Eli, 2005). Professor of sustainability, Scott Boylston explains that sustainability is not a new concept of this century, but instead, fits in with the writings of every historical philosopher, and the principles of every world religion, and that it is only now that humans have needed such a word like sustainability (Boylston, 2009).

In this thesis, respecting the past research and definitions of sustainability in relation to the environment, the definition is kept simple - it is the environmentally conscious activities of humankind that counter threats to the planet and result in a less adverse future. Notwithstanding this common definition, this study understands that the definition of sustainability is constantly evolving among academics and practices (Morelli, 2011).

#### 2.4.1.1 Sustainability as a Mega Trend

The climate is changing with substantial physical impacts across the world (Woetzel et al., 2020). Sustainability is a mega trend, and more efforts to relieve ecological stress is being explored and practiced on every level. Governments, businesses, and consumers are increasingly becoming aware of the imminent threat that climate change poses.

In the World Economic Forum held at Davos-Klosters from January 21 to 24 in 2020, sustainability and climate change remained the biggest topic of discussion for world leaders, where extreme weather is the biggest danger the world faces today (Pomeroy, 2020). In September 2019, Goldman Sachs released a report on the imminent threat of climate change and the immediate need for cities and businesses to adapt, stating that the risks are significant, and could possibly reshape the earth (Hindlian et al., 2019). Finnish innovation think tank Sitra defines the megatrends of 2020 to be centered around ecological reconstruction; problems like response to climate change, biodiversity, resource and waste issues should be the focus and that other trends must be taken with this in the back (Solovjew-Wartiovaara, 2019). Though the term sustainability had always been around, recent escalation of engagement with environmental issues, especially with the increased threat to climate change and its global impact, places the topic as an ever novel mega trend.

#### 2.4.1.2 The Sustainable Development Goals as a Guiding Milestone

The United Nations member states adopted a collective and cooperative measure, the Sustainable Development Goals (SDGs), in 2015. This is an effort to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030, under 17 topics ranging from no poverty, gender equality, to tackling climate change in various areas (United Nations Development Programme, 2020).



## SUSTAINABLE DEVELOPMENT GOALS



Image 5. Sustainable Development Goals (United Nations, 2019)

The 12th goal of the SDGs is titled as “Responsible Consumption and Production.” As global material consumption increases with unprecedented speed, so has material footprint per capita, seriously jeopardizing the achievement of the Goal. In 2017, worldwide material consumption reached over 92 billion tons, up from 87 billion in 2015 and a colossal increase from 27 billion in 1970, with the rate of extraction accelerating every year since 2000 (United Nations, 2020). This reflects the increased demand for natural resources that has defined the past decades, resulting in undue burden on environmental resources. Without urgent and concerted political action, it is projected that global resource extraction could grow to 190 billion tons by 2060 (2020).

In reality, the United Nations advises both businesses and consumers to take action to mitigate the environmental burden from both sides; to businesses, to find solutions that enable sustainable consumption and manufacturing patterns, and to regular consumers, to simply reduce the amount of waste and to be mindful in the choice whenever making purchases (2020).

### 2.4.1.3 Negative Impacts without Packaging

It is important to recognize the importance of the function of packaging. Without them, things inside may go bad faster, and food waste may be higher. If they break during transport, the same thing will apply. A cucumber, wrapped with plastic will last two weeks, instead of three days without it (Flexible Packaging Association as cited in Abboud, 2019). This kind of negative impact without packaging is especially troublesome, as British supermarket chain Tesco's chief executive states that “one ton of food waste has the impact of three tons of packaging waste when it comes to climate change” (Lewis as cited in Abboud, 2019). Specifically, food waste contributes to the over-consumption of fresh water and fossil fuel, along with emitting methane and carbon during decomposition, ultimately becoming a source of climate change (Hall et al., 2009). Vilifying plastic, let alone packaging itself therefore, should not be the focus nor the question. The functionality of protecting what is being packaged, remains vital.

### 2.4.2 Sustainable Packaging

To the question on why sustainability is necessary for the domain of packaging, Boylston breaks down some of the environmental effects it has, ranging from solid waste, water pollution, air pollution, forest depletion, raw material depletion, energy consumption, social distress, and finally as a whole, to climate change (Boylston, 2009). Simply put, the waste of resources that result from excessive packaging has a negative impact on the environment, and damages the climate (Kawakami, 2014).

As much as packaging is a necessity, consideration with cutting down limited resources is crucial. Boylston states that waste is a by-product of almost a luxury, and packaging contributes greatly to the overuse of natural resources on the front end, and excessive waste on the back end (Boylston, 2009). Material consumption is growing, and parallel to it, packaging waste is also increasing. In order to mitigate environmental effects, there is the notion of sustainable packaging, where it aims to minimize the ecological damage while serving its purpose to the maximum potential. The Sustainable Packaging Coalition defines the term “sustainable packaging” in the following set of goals: (Sustainable Packaging Coalition, 2020):

1. *Is beneficial, safe & healthy for individuals and communities throughout its life cycle*
2. *Meets market criteria for performance and cost*
3. *Is sourced, manufactured, transported, and recycled using renewable energy*
4. *Optimizes the use of renewable or recycled source materials*
5. *Is manufactured using clean production technologies and best practices*
6. *Is made from materials healthy throughout the life cycle*
7. *Is physically designed to optimize materials and energy*
8. *Is effectively recovered and utilized in biological and/or industrial closed loop cycles (p.1).*

Jedlička clarifies that the main point of the eight goals above is to ask if it makes people or the planet sick - if the answer is yes, do not do it. This follows the entire supply chain eco-ness, materials use, loop participation, and social impacts (Jedlička et al., 2009). Dr. Amel and Dr. Manning go further and point out that the most sustainable packaging is no packaging (Amel et al., 2009). But this is quite difficult to achieve. Despite their downsides, plastics have immense merits, including their light weight, which can result in less fuel consumption during transportation, as well as reducing the need for clipping new materials, when recycled properly (Boylston, 2009).

In his book "The Green Imperative," Victor Papanek coins the phrase "package as product" to critique consumer infatuation with the outward appearance of packages (Papanek, 1995). He explains that the market impulse to acknowledge a package's physical appearance as a sign of trust and the product's quality is a dangerous form to justify over packaging (Boylston, 2009). Papanek's argument counters directly with the notion of packaging as a product, that we learned to be so important in the Japanese culture and society. Whereas for the Japanese, the packaging itself is significant, if not more, than the item it is packaging, Papanek criticizes the very behavior of packaging becoming the object to lure and market goods that produce more waste.

#### 2.4.2.1 Trends and Innovations in Sustainable Packaging

Let us now take a look at some of the trends and innovations that are happening in the years 2019-2020. At the Packaging Innovation trade show in London 2019, where companies all over the world, big and small come together to showcase their latest solutions on innovative packaging, four big trends were identified by the trend forecast firm WGSN (Kilikita, 2019):

1. *Going plastic-free : cutting down on plastic usage by removing or reducing plastic content in packaging in favour of bio-based or reusable alternatives.*
2. *Balancing sustainability with unboxing : using eco-friendly decoration such as glitters, ribbons or foils for an elevated aesthetic.*
3. *Upcycling waste and closing the loop : creating circular systems that transform waste, such as turning plastic bottles into new packaging materials.*
4. *Thinking practically : Exploring eco-friendly, on-the-go options that offer the same level of heat retention as plastic packs, to offer convenience and fit for purpose. (p.2).*

The war against plastic has been a massive one, each battle ranging from government regulation, private sector efforts in capturing ocean plastic, bio-based material, and all the way down to simply saying replacing plastic to alternative materials. An institution that places high up on the spectrum may be the organization A Plastic Planet, which advocates for complete abolishment of single use plastic, saying "turn off the plastic tap" (A Plastic Planet, 2019). They gained media attention and grew bigger from their world's first plastic-free aisle campaign in a supermarket, Ekoplaza, in Amsterdam in 2018 (Taylor, 2018). Conversely to the total eradication of plastics, but still offering alternatives to plastic, the Ellen Macarthur foundation puts emphasis on reusability in packaging as a critical factor to eliminate plastic pollution. They examine and report 69 cases where reusable packaging systems help both the consumers and the businesses, based on innovation and scale (Ellen Macarthur Foundation, 2019).

Riberti et al. identify rising trends such as zero waste, a movement where conscious consumers bring their own containers to stores that do not offer packaged products. These stores typically sell items by the unit. Riberti et al. state that *Unpackaged*, is perhaps one of the first stores ever to be a zero-packaging store. Created by Catherine Conway in London, customers can refill their own containers with organic foods such as cereal and chocolate, and pay by the weight in which they bought (Riberti et al., 2016).

Similar movements can be seen in delivery type services. *Loop* is a company that aims to eliminate packaging waste by delivering, collecting, and then refilling consumer products for the home. Their products range from laundry detergent, shampoo, and all the way to ice cream like Haagen Daz (Loop, 2020). *Splosh* is another company that aims to cut down on the plastic packaging. Like *Loop*, their business concentrates on the refilling of home commodities, but instead of delivering and collecting door to door, they use normal post to cycle their items. Customers can first order bottles from *Splosh*, and start buying the refills of content that come in pouches. They then send back the pouches, and the refills will come once again. As of January 2020, they have saved over 400,000 bottles with their business (Splosh, 2020).

#### 2.4.2.2 Big-picture Frameworks for Sustainable Packaging

With so many streams of trends and innovative businesses making colossal difference, it is easy to lose the big picture about sustainability with regards to packaging. In theory, packaging sustainability should follow a common set of understandings. This section reviews some of the major theoretical frameworks for sustainable packaging.

##### The Triple Bottom Line

Sustainability cannot be achieved by optimizing a single point. The triple bottom line is a tripartite concept that includes environmental, societal, and economic factors, also standing for people, planet, and profit. Sustainability may be shown as the intersection of these three domains with the economic system embedded in the environment (Jedlička et al., 2009). The diagram by Jedlička et al. explains where packaging stands - primarily inside the economic system, secondly embedded in society, and finally enveloped in the environment. The model shows the interconnectivity of all the components - even if a single material used for packaging might appear to have a nice loop within its economic circle, it could potentially have negative impacts to society and the environment. A preferable model will have appropriate materials that not only benefit the workers and the environment, but also satisfy the economy. This is a continuous reminder that connections and the consideration for them remains the fundamental principle in sustainability (Jedlička et al., 2009).

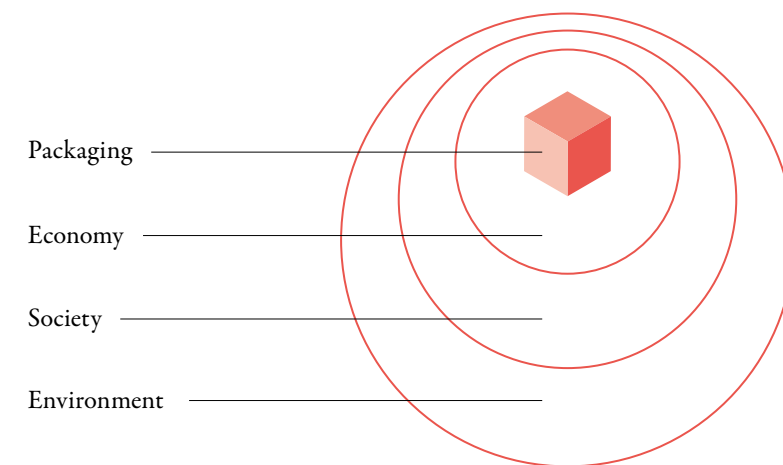


Figure 13. Packaging exists inside economic, societal, and environmental systems (Adaptation from Jedlička et al., 2009)

## Life Cycle Assessment

Although this thesis only looks at Japanese packaging at the consumer's touch point phase, it is vital to acknowledge that dozens of factors play a role when thinking about sustainability. From production to transport to consumption, there are many. That process of thinking of the many degrees of influence is called the life cycle thinking (Jedlička et al., 2009). The specific method for quantifying the impact is often done through a Life Cycle Assessment (LCA). An LCA looks closely at the entire range of factors, from "upstream" costs such as energy consumption, raw materials extraction, transportation, infrastructure, toxic by-products and habitat and climate impacts, to "downstream" costs such as distribution, consumer convenience, product protection (from criminal encroachment as well as breakage and spoilage), shelf storage, marketing needs, disposal and recyclability (Boylston, 2009). This means that in order to ensure sustainable practices, product related measures should not only focus on the recyclability or the reusability at the end of the cycle, but also on the merits to the environment during the entire life cycle (Plastics Europe, 2019). While the specific steps and methods to conduct an LCA is beyond the scope of this thesis, it is paramount to understand the concept of packaging as a journey - from the materials to the consumption.

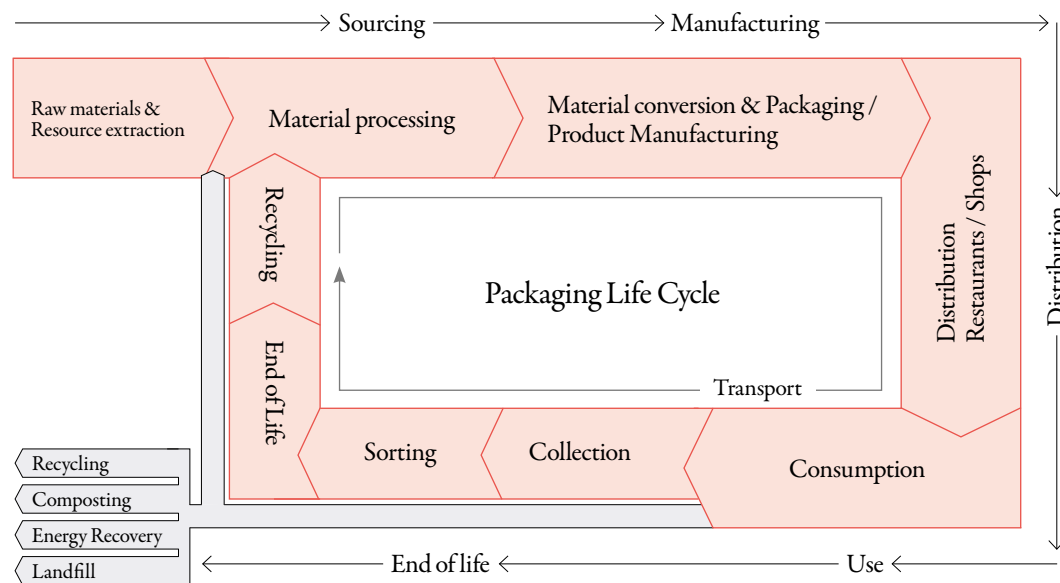


Figure 14. Packaging Life Cycle Assessment (Adaptation from SPC / GreenBlue in Jedlička et al., 2009)

## Cradle to Cradle® Philosophy in Packaging

The Cradle to Cradle® philosophy (C2C) is an ecological design doctrine developed by architect William McDonough and chemist Dr. Michael Braungart, in the 1990s. It is fundamentally about constantly improving the cycle of consumption and moving from simply being "less bad" to becoming "more good." In contrast to the conventional demand side approaches that often seek to reduce or minimize damage and shrink "negative footprint," a "positive footprint" may become possible by adding an eco-effective supply side approach based on Cradle to Cradle® values and principles (MBDC, 2020; EPEA, 2020). Whereas the Life Cycle Analysis displays negative cost if material ends up as waste and positive cost if recycled, the C2C model reuses material for additional cycles. In reality, the Cradle to Cradle® philosophy is applied to packaging in ways that after it has served its purpose, they can have a new beginning, returning to the production cycle, or into the biological system (Jedlička et al., 2009). This concept is opposite to Cradle to Grave, where products, materials, and other items simply may, although be recycled, eventually end up in landfill after a number of cycles.

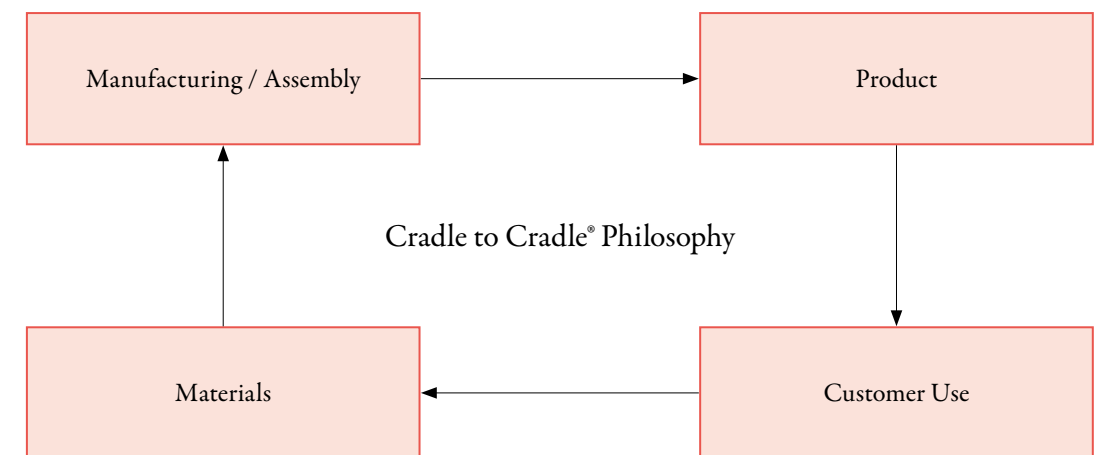


Figure 15. Cradle to Cradle® Model (Adaptation from MBDC, 2020)

## The Waste Hierarchy

Design practitioner and educator Gavin Ambrose explains that there are multiple levels of preference in waste management strategy, ranging from no waste (prevention), to waste (disposal). The concept is based on the 3R's - reduce, reuse, and recycle. At the top of the hierarchy stands prevention, where discarding the package is literally prevented. This can happen where functionality of the inner packaging no longer requires the outer layer, thereby preventing an "excess" use of packaging. The hierarchy goes down towards less preferable options, such as minimizing packaging, reusing, recycling, turning them into energy, and then finally disposal, where discarding the material stands as the least preferable option (Ambrose et al., 2011). This diagram helps think strategically about the amount of packaging and its position in terms of sustainability. Furthermore, it is possible to provide objective assessment on whether a product's packaging contradicts the concepts of sustainability, and make critical decisions on improvement.

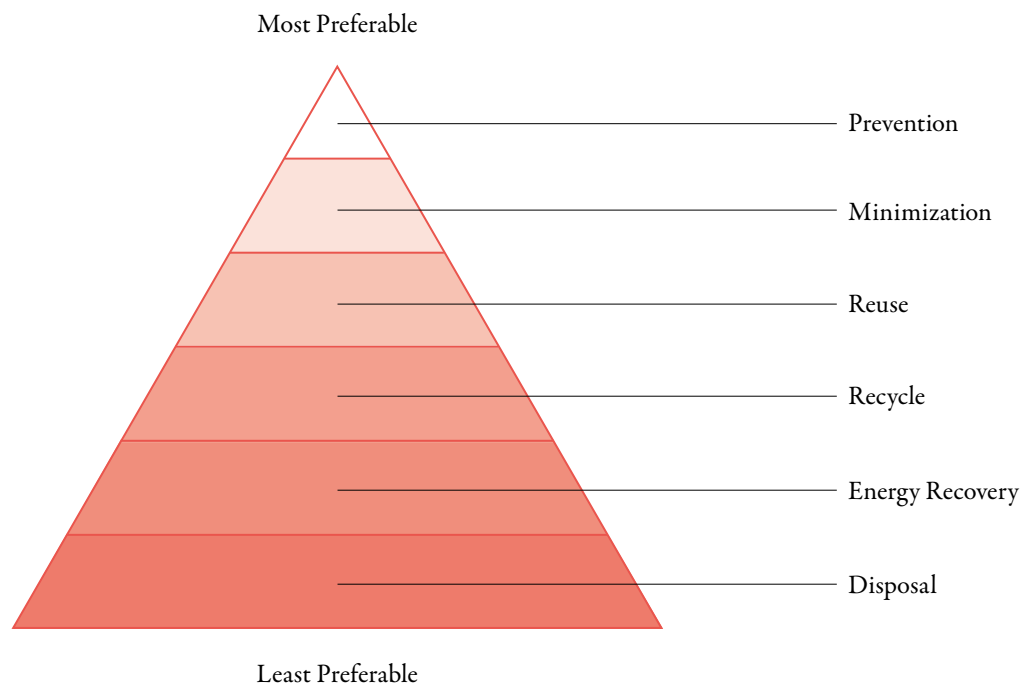


Figure 16. Waste management preference (Adaptation from Ambrose et al., 2011)

## 2.5 SYNTHESIZING THE THEORETICAL STUDY

Through the theoretical study, the thesis looked at two big blocks of information - Japanese packaging, and sustainable packaging.

There are essentially three factors that shape the current state of Japanese packaging: Cultural Anthropology, Political Influence, and Modern History. We learned that packaging in Japan is deeply rooted in the culture, where three things mainly hang below this, which are Gift-giving culture, Hygiene, and Packaging as Divinity. Not one of these are mutually exclusive to another - they are all interconnected to each other, affecting and being affected. A bird's-eye view of this confirms the special position that packaging has in Japan, both as a society and a culture, and signifies the inherent contrast from the meaning of packaging in other parts of the world, where packaging serves as a utilitarian medium. In terms of controlling the waste, policies have been installed to ensure recycling of packaging materials, and current efforts on both public and private sectors display the positive direction which the country is heading towards. A peek into modern history reveals some important events such as the food terrorism that took place in the country that shaped its current manners in packaging safety.

At the same time, numerous innovations in sustainable packaging are surfacing in the world today. Goals such as the SDGs advocate for mindful business and consumption; this means fewer packaging material should be used, and more eco-friendly materials should be considered for the chemical compounds of the surroundings. The cycle of the packaging should always be considered, as the packaging is merely the end product of a complex journey of materials. Innovative services today aim to reduce the amount of materials and prolong the life of packaging. These include services like *Loop* and *Splosh*, that deliver daily commodities through refill, thus eliminating packaging waste as a whole. Other efforts can be seen in super markets that only offer non-packaged goods, where consumers bring their own containers, and pay by the weight/amount of the goods they buy. Material innovations are also done - bio-based plastic materials are emerging, aiming to replace the entire industry of single use plastics that do not disassemble in nature. These material innovations are further going to accelerate.

Synthesizing the two blocks of information from the theoretical study, it is conclusive that the concept of packaging in Japan is compelling enough to make a socio-cultural doctrine around it, and perhaps the current practices of Japanese packaging could be considered contradictory to the understanding of sustainability. Instances like the individual packets, projected against the waste hierarchy model (Figure 16), is most certainly not in the highest tier (prevention). Enforced by regulation, it is more likely in the third to fifth tiers (reuse, recycle, and energy recovery). The trend of packaging, with many drivers and strategies supporting it, suggests that the future will include more sustainable solutions. Emerging examples of sustainable packaging in Japan, and data on the awareness among consumers, exemplify that the standard practices may gravitate towards ecologically friendly means in the country. The initial juxtaposition of the forces that look in different directions, in reality, may be starting to look in the same way (Figure 17).

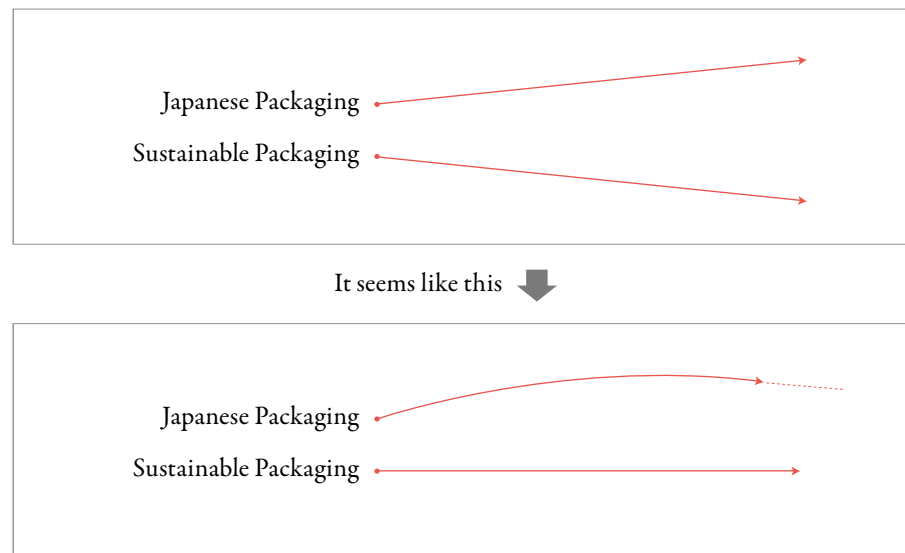


Figure 17. Juxtaposition of forces starting to look the same way

If the forces are beginning to look in the same direction, how can Japanese packaging - in a culture that values the packaging as the product - be balanced with an increasingly sustainability conscious world, while staying true to the values?

III. METHODOLOGY & METHODS

Having the first research question uncovered through the theoretical study, the gap between Japanese packaging and sustainability was identified, and these following two research questions were crystallized as a result:

- 2. Does Japanese packaging for high-end confectionery pose a challenge to sustainability?
- 3. Can Japanese packaging for high-end confectionery be in sync with an increasingly sustainable world, while staying true to the socio-cultural values of Japan? If so, how?

The above two questions, although vaguely in words but clearly of interest in my mind from the start of this study, needed to be materialized in those words only after the theoretical study had been done. One of the reasons is the novelty of the convergence of Japanese and sustainable packaging. Another is the uncertainty and subjectivity of the topic; because the topic is quite abstract, the study is exploratory (Muratovski, 2016).

3.1 RESEARCH DESIGN

As the research question is exploratory by nature (Creswell et al., 2016), first-hand experience and knowledge from people were required in order to gain insight. The study employs the multimethod approach, where a combination of qualitative and quantitative research methods are utilized according to different groups of people, as the merit of using it allows for greater flexibility in seeking new ways of thinking about people and phenomena (Muratovski, 2016). In the case for the above two questions, three different perspectives - the immediate stakeholders that surround packaging - were needed : manufacturing, distribution, and use (Figure 18). The immediate stakeholder is decided on the life cycle diagram by the Sustainable Packaging Coalition/GreenBlue. To acquire these first-hand knowledge, three research methods were used.

The first one is rapid cultural calibration, where I as an investigator, go out in the shoes of a regular consumer to a department store and document the shopping experience around Japanese high-end confectionery. The second one is quantitative research, where a survey is

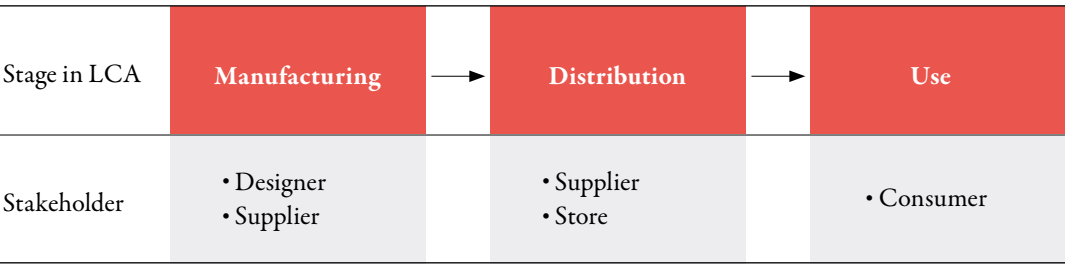


Figure 18. Stages in the LCA that directly tie to consumption (Adaptation from SPC/Green Blue in Jedlička et al., 2009)

answered by 230 Japanese consumers on the topic of Japanese packaging. In finding out if Japanese packaging can be in sync with sustainability, from the consumers, I aimed to grasp the ordinary consumer’s feelings towards the current state of packaging in Japan.

The third and the main method is semi-structured interviews with industry professionals around packaging design. Five award-winning professional Japanese designers, and one packaging manufacturer were interviewed. All of the designers are practitioners who have extensive experience in graphic/packaging/branding design. Through the discussions with the professional designers, I attempted to hear their design philosophies and processes in their studios, as well as how they manifest their philosophies into the design. Especially important was to discover how packaging design in Japan juxtaposes with sustainability, and what future might be in place for packaging design in Japan. Through the manufacturer, I attempted to hear first hand about their policy and their thoughts on the efforts of sustainable packaging in Japan.

	Quantitative	Qualitative	
	Survey	Rapid cultural calibration	Semi-structured interview
Designer			✓
Manufacturer			✓
Consumer	✓	✓	

Figure 19. Methods chosen for each target group



## 3.2 RAPID CULTURAL CALIBRATION

### 3.2.1 The Rapid Cultural Calibration Method

The first research method is rapid cultural calibration, where I as an investigator, go out and acquire authentic experience myself (Chipchase et al., 2013). The bigger picture goal of this method is to get first-hand information by putting oneself into the surroundings of the material s/he is researching. Putting ethnographic research in an urban city as an example, it “can take the form of a stroll at dawn or a rush hour subway ride; a visit to a barbershop, a train station, or the local outpost of a global chain restaurant: or even a slight pause for contemplation at the sight of signage” (2013). This method is an appropriate technique in order to experience how Japanese packaging might be perceived in an urban setting in modern Japan.

In this case, the setting was in Tokyo, where I had spent three weeks conducting empirical research. For this study specifically, I put myself in the shoes of a regular consumer, paid a visit to a department store, saw the product and packaging, and documented the shopping experience for the confectionery. It must be clarified that I, the researcher and the author, is a native Japanese, and have lived in Tokyo on and off, but extensively throughout my adulthood. The reason why I purposely framed this as a research block is to provide context - to report the latest state of the phenomena in question, and tangibly interact with the store staff. The limitations for this method is that the experience is highly subjective, and does not provide scientific proof; rather, it must be seen as an experiential phenomena reporting.

## 3.3 SURVEY TO JAPANESE CITIZENS

### 3.3.1 The Survey Method

Surveys are an effective method of getting a concentrated volume of opinions in a controlled set, and are effective in documenting people’s characteristics, opinions, attitudes, or previous experiences. While it only acquires snapshots in time, it is a method that is most widely used in quantitative research (Muratovski, 2015). Because this study aimed to get insights into what ordinary Japanese consumers thought about packaging in Japan within the context of high-end confectionery, the survey was a good method to not only quantify the data, but also to get the collective amount very rapidly.

An online consumer survey tool, *Surveroid*, provided by a Japanese online research corporation, Market Applications Inc., was used to create and conduct the survey. The service has 2 million registered monitors across the nation, and surveys can be sent to segmented geography, age, and gender (Marketing Applications Inc., 2020). This service was chosen also because it was able to get the closest targeted number for each desired segment. I wished to get both female and male answers in equal amounts, to which I got 50.4% female response and 49.6% male response. Also I wished to get data from a controlled age group, segmented into five different age groups: 20-29, 30-39, 40-49, 50-59, 60+, and each segment yielded 20%, or close to 20%. The tool also comes with its own analysis software, that allows to aggregate the response, cross analyze, and export the results in selected graphing styles. This tool was appropriate, as the topic of this thesis was simple and close enough to ordinary Japanese citizens, and also the budget required for a 10-question survey fit the research. Contrasting to other survey tools in Japan that required bigger capital and/or corporate membership registration, this tool fit the needs of this thesis. Through this survey I wish to know how ordinary citizens feel about Japanese packaging in high-end confectionery. All of these questions were designed as yes/no questions, with the exception of one, and accumulated quantitatively.



## 3.4 SEMI-STRUCTURED INTERVIEWS

### 3.4.1 Semi-structured Interview Methods

Semi-structured interviews are practical in order to retrieve close ended answers but allow further discussion with open ended questions. These work well with participants who are happy to express themselves with the topic, and are limited to the subject of the interview (Muratovski, 2016). All of whom I interviewed were cooperative in partaking in the interview, as they were experts in the field. The purpose of the semi-structured interviews was to get first hand information from experts who have been doing packaging design in Japan. I chose the semi-structured interview form, as it allows a frame of structure, but also leaves enough freedom to explore areas that I may have been missing. All of the participants were contacted by email, to which they agreed for a face-to-face interview in Tokyo. Because of the coronavirus (COVID-19) pandemic spread that began in January in Japan, one of the interviews was ultimately changed to a remote phone interview.

### 3.4.2 Interviewee Profiles

No.	Profession and Title	Design Environment	Expertise in Context
1	Designer	Individual Studio	Branding, Graphic, Packaging
2	Designer, CEO	Corporate	Branding, Graphic, Packaging
3	Designer	Individual Studio	Branding, Graphic, Packaging
4	Designer, CEO	Studio	Branding, Graphic, Packaging
5	Designers, CEO, COO, CCO	Studio	Branding, Strategy, Packaging
6	Public Relations	Corporate	Packaging material, Sustainability

## IV. DATA COLLECTION & ANALYSIS

### 4.1 RAPID CULTURAL CALIBRATION

#### 4.1.1 Data Collection : Execution

On December 20th 2019, I set out to Shibuya, one of the central entertainment and business districts of Tokyo. In one of the main buildings that stand in the middle of the district is the Tokyu Department store, a classic store that has been there for decades and acts as a symbol of the thriving economy. Both women and men, old and young, flood the area with uninterrupted excitement. My intention for this calibration method was to, with as little prejudice as possible, experience and document the shopping for high-end confectionery in a modern metropolitan context. Although my previous informal discussions with friends who had been to Tokyo, and many remarks online elucidate that the consumer experience in Japan is contradictory to the ideas of sustainability (Kyodo, 2019), I conducted this field work to see the phenomena for myself first-hand, with the intention of experiencing it with the lens of an outside investigator.

On the basement floor of the Tokyu Department store is the food and delicacy floor, where there is a supermarket section, small specialty stores that sell side dishes, and high-end confectionery stores. My target was to visit the confectionery stores section, see what kind of products and packaging design are there, and actually buy a few that fit within the allocated budget. This research by nature is not exhaustive. At this point, I had no specific target on what to buy from which store - the emphasis of this process was heavily on experiencing the visual stimulation of all the beautiful packaging designs that decorate the shelves, as well as what kind of interaction took place during the buying process. The following images represent some of the items I saw in the stores (Images 6-11):



Image 6. Confectionery



Image 7. Confectionery



Image 8. Confectionery



Image 9. Confectionery



Image 10. Confectionery



Image 11. Confectionery

Images 6-11. Confectionery seen from the rapid cultural calibration

## The Purchasing Experience

My first stop was at a confectionery store that specializes in Western snacks such as cookies and chocolate. As it was the New Year gift season (*Onenga*) - and as we have already studied, gift-giving is a central component to Japanese culture - I purchased two sets of gift boxes. The staff asked me if I wanted to put the *Noshi* (the piece of paper that symbolizes the situation of the gift, info on chapter 2), and I said yes. On the *Noshi*, it reads *Onenga*, which basically means “New Years gift”. Also printed on the *Noshi* is the red and white *Mizuhiki*, and the good luck fortune abalone. The staff, before handing me the items, asked me if I wanted those two to be in an additional plastic bag (Image 13). “For what reason?” I asked, and she replied that the *Noshi* paper does not be damaged or ruined during transport. I said yes and asked her to put the items in the extra plastic bag.



Image 12. *Noshi* paper applied to the packaging

Image 12 is a close up of how the *Noshi* paper is applied to the packaging. This is the most accepted form nowadays, and considered formal and appropriate as gifts. The extra plastic was applied so that the edges of the *Noshi* paper will not fold or curl during transit (Image 13).



Image 13. The extra plastic allows the *Noshi* paper to be protected (from scratches, rain, or other damages)

My second stop was at another Western confectionery store, and this time I bought a smaller item, without any *Noshi*. The item was neatly packaged with a ribbon, as it was originally intended to be. At the third and last stop, I purchased a New Year specialty gift box. By then, I was holding two different bags from two different stores. The staff looked at me and asked, in addition to their own paper bag, if I wanted her to combine all of my purchases into a bigger bag, for “transportation convenience.” For the sake of this field research, I kindly asked her to do so (Image 14). While this is a nice gesture of the staff, unquestionably trained to do so for customer service, it is also imaginable the marketing benefits for them - if all of my purchases were in their big bag, I carry around their brand as a walking advertisement.



Image 14. A staff compiling all of my purchases in a big bag

#### 4.1.2 Result of the Rapid Cultural Calibration and Analysis

It must be noted that this was carried out during the New Year’s (*Onenga*) gift-giving season, so the special assortments and packaging decoration to promote it is seen in the items. Also the *Noshi* paper is applied on top of the wrapping paper in two of the items I had bought. For this active research experiment, I consciously answered “yes” whenever the staff asked me if I needed an extra bag for the purpose of giving the item to someone else. The following are notable points I encountered in the purchasing experience:

- Almost every store and their products have individual packets
- All products have intense decoration competing for attention, like ribbons, non-woven light fabric, strings, and other ornamentation (the new year gift season may have added on to this effect)
- The plastic layer on top of the *Noshi* paper felt excessive
- The offering of the additional bag (to give to others) felt excessive
- The compiling of all my bags into one big bag, felt excessive

The staff behind the counters were all nicely aggressive in trying to get me to buy something. This came in the form of extreme politeness, offering me free samples, asking me if I had any questions about the items, or simply saying “hello welcome to our counter.”

Quantifying or aggregating all of the different products among the numerous stores in the department store, is beyond the scope of this research. As stated earlier, this method remains subjective by nature - the result is immensely arbitrary. Putting together the above points above though, a common denominator is the extensive hospitality from the staff that overarches this whole experience, where the notion seems to be *more is more*. The layers of packaging, the offering of bags, each additional layer presented to the customer is a signal of hospitality, also to ensure that the customer’s cordiality (giving the gift to someone else) is executed perfectly and without any disruption. Projecting these results from this experience against the 12th goal of the SDGs therefore presents a contradiction. Whereas the goal states that we should cut down on simple consumption of materials, the hospitality carried out to almost an extreme is far from achieving the goal. From a purely utilitarian point of view, the answer to the second research question - *Does Japanese packaging for high-end confectionery pose a challenge to sustainability?* - might be affirmative.

### 4.1.3 Limitations

This method has obvious limitations, in that the approach itself is highly subjective by nature. The personal experience and its reporting is the main content, and although throughout this method I was mindful about being as objective as possible, as a native Japanese person, there may have been bias that divulged. Also, very little variable control can be manifested into the calibration. For example, specific events like the staff offering me enormous hospitality, may or may not happen depending on the timing. The findings from this study should be taken as a possibility, and not a conclusive argument.

## 4.2 SURVEY TO JAPANESE CITIZENS

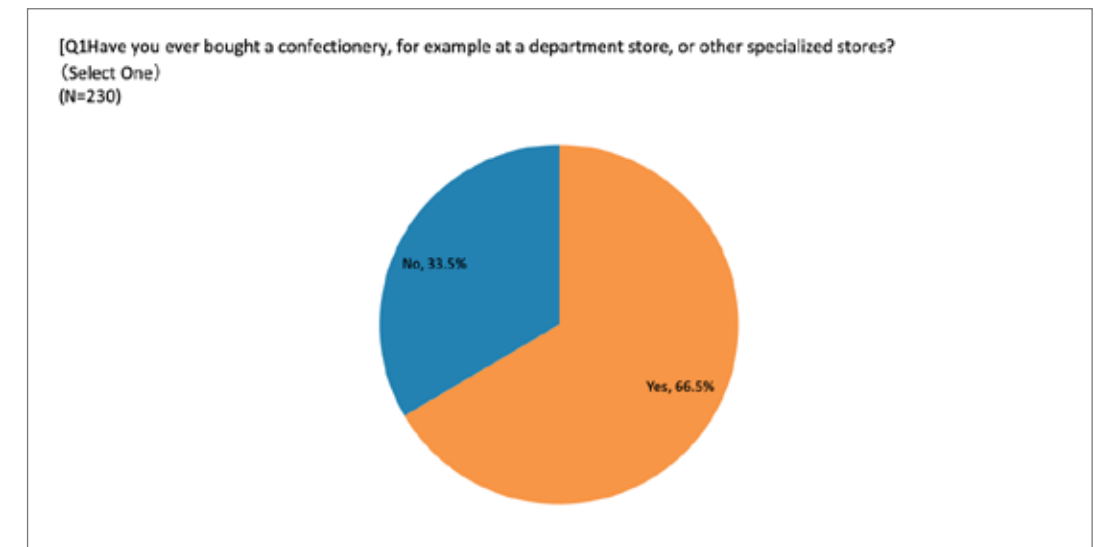
### 4.2.1 Survey Content

The survey questions (the original questions were written and sent in Japanese) and the results in graphs can be found in the appendices.

### 4.2.2 Survey Result and Analysis

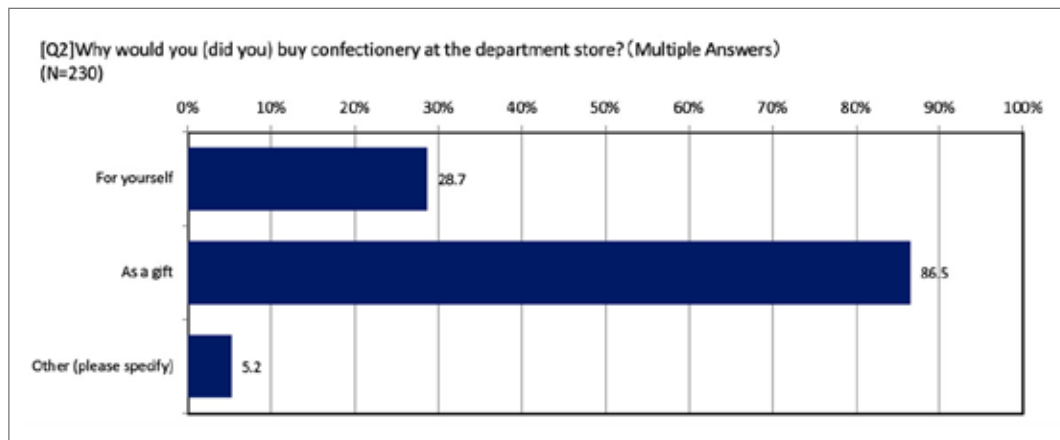
To get numeric insight on the ordinary Japanese consumer as a whole, the survey was designed to be as close-ended as possible. All except one question were single or multiple selection answers. For questions that could have ambiguity in answers, an option saying “other (please specify)” was offered, so that people had a chance to express these if they so wished to. The most interesting points that can be seen are the following:

1. Over 66% of the people have bought high end confectionery (at department stores, for example)



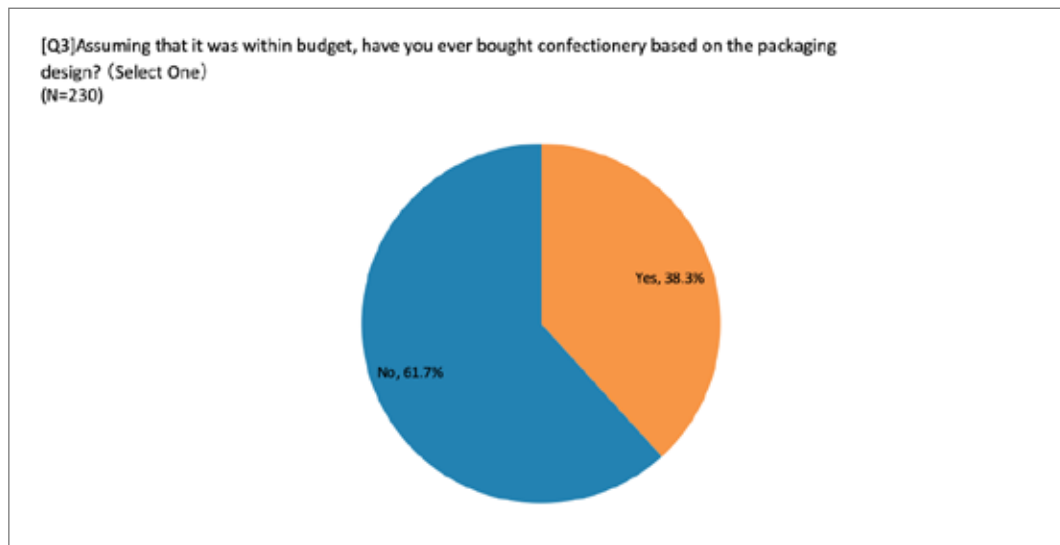
The figure 66.5%, says that the majority of people have bought high-end confectionery, but this was surprising and unexpected, as my initial guess was that more people would have answered “yes”.

2. Over 86% of the people buy high-end confectionery as a gift



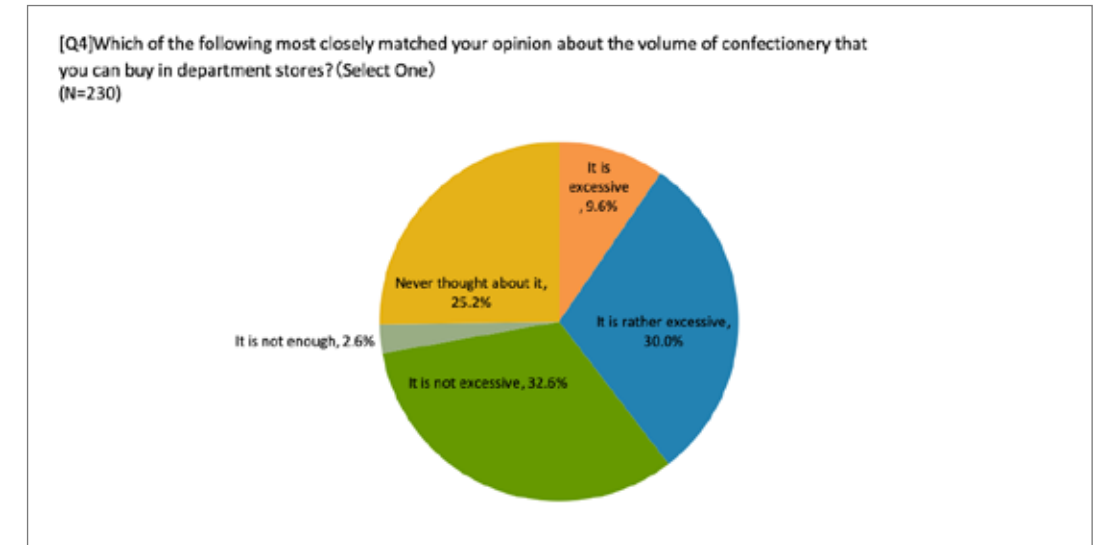
This was not a surprising discovery, but a good confirmation to see in numbers. This implies that the earlier theoretical study about the significance of gift-giving, may still hold true in the modern Japanese context.

3. Close to 40% of the people have decided to buy an item for its packaging design (assuming it was within budget), instead of the content



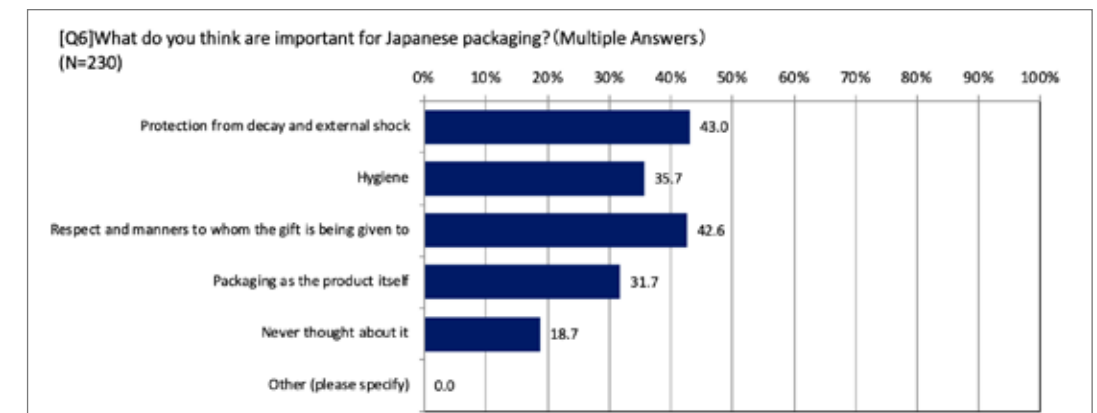
This was an important finding, as we have seen from the theoretical study that the packaging itself is the product in the culture. Packaging design in Japan does have an effect on the decision to buy high-end confectionery.

4. A combined close to 40% of the people think Japanese packaging for high-end confectionery is excessive, or rather excessive



This was anticipated, but surprising to see, coming from Japanese consumers. The number 40% (thinking it is excessive) is quite arbitrary, in terms of if that number is big or small. 32% say it is not excessive, and 2.6% say it is not enough. 25% say they have never thought about it.

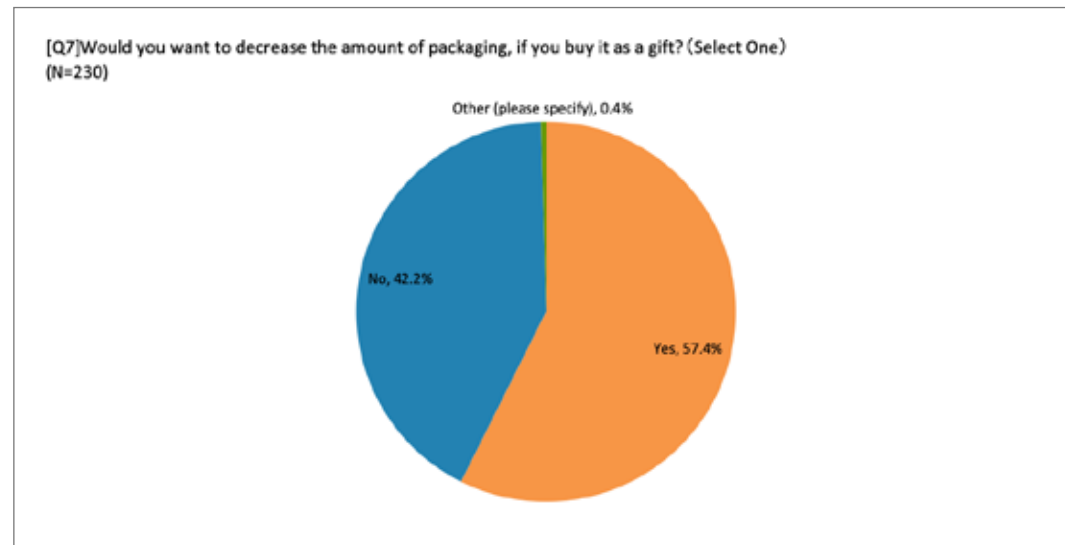
5. Over 42% of the people think that packaging functions as displays of respect and manners



This number is also surprising, as it may pose some challenges to the learnings from the earlier theoretical study. Not all the people think about the packaging as a form of communicating respect and manners.

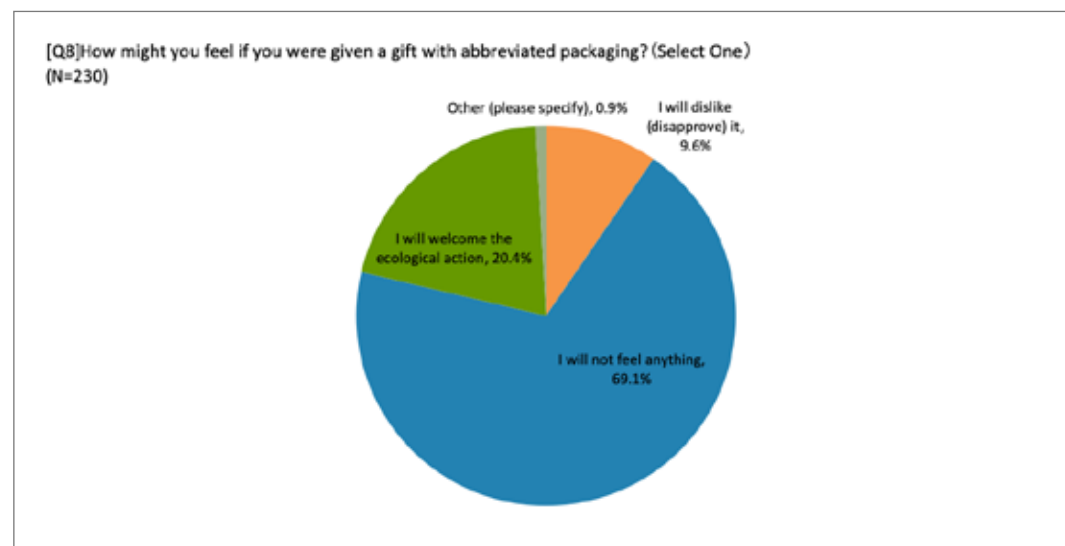


6. Close to 60% of the people say they would like to abbreviate the amount of packaging for ecological reasons, when buying/giving gifts to someone



The majority of respondents say they would like to cut down on the amount of packaging for sustainability reasons. This could be a catalyst to test out using less packaging material, both in the product and in the staff to customer interaction.

7. Close to 70% of the people will not mind if they receive gifts with less or abbreviated packaging, for sustainability reasons, and over 20% of the people say they will even welcome the ecological gesture



As with the previous question, most of the people would like to cut down on the volume of packaging when buying and sending gifts. However, one of the hindights to doing this is the possibility of offending the other by doing so. Therefore, the combined number of 90% saying that they will not mind the abbreviated packaging, is a bolster for steps to cut down on material. Of course, the exact way these packaging are presented are omitted from this question, and it must be considered as a limitation.

8. Among those who know about sustainable actions taken by confectionery companies, KitKat was the number one most widely known (excluding cases of others/forgot)

Brand/Company	Count	%
KitKat	10	20.83
Meiji	3	6.25
Morinaga	2	4.17
Bourbon	1	2.08
Glico	1	2.08
Morozoff	1	2.08
Ogurayama	1	2.08
Takasagoya	1	2.08
Harada	1	2.08
Rokkatei	1	2.08
Fujiya	1	2.08
Chidori Manju	1	2.08
Happy Turn	1	2.08
Forgot name/Other	23	47.92
Total	48	100.00

As we saw in the example of sustainable signals within Japan, the impact of Nestlé's KitKat is quite big among those who know about sustainable actions in recent news.

The objective of conducting this survey was to find out the mindset of general consumers on how they perceive packaging in Japan with regards to high-end confectionery. The most important finding from this survey may be that there is room for further sustainable efforts in packaging - both in practice and in consumer awareness (i.e. communicating sustainability). The data suggests that recognition of sustainability is present, but whether that number is big or small is arbitrary. An interesting outcome from this survey is that whereas packaging in Japan displays manners to whom the gift is being sent to, the majority, a combined total of close to 90% of the people, say they simply do not mind if they receive a gift with abbreviated packaging for ecological reasons. Acknowledging that it may depend on the form and occasion, this presents a possibility that the citizens are capable and ready of seeing more sustainable packaging practices.

### 4.2.3 Limitations

This survey has limitations. The first one is the sample size; it was ultimately answered by 230 monitors. The desired sample size in order to draw conclusion-worthy points with an acceptable margin of error, for a population over 100,000 is over 1,000 (Israel, 1992; Cochran, 1995). However, this proved to be difficult, as the budget will have exceeded significantly. Hence it must hereby be noted as the limitation for this quantitative research, that the number 230 is small and does not represent the mass market opinion of the population of Japan. Acknowledging that the numbers of respondents and the required sample size have a critical chasm, the survey therefore, should only be looked at as a fragment of the whole picture, and not a concrete evidence. Secondly, the budget only allowed 10 questions to which the survey was designed to ask consumer perception around the packaging phenomena at a basic level. In acquiring deeper insights, for future reference, the survey content can be further improved. Additionally, in order to track consumer perception over time, it may be beneficial to conduct survey research on a regular basis to monitor the change in numbers.

## 4.3 SEMI-STRUCTURED INTERVIEWS

### 4.3.1 Interviews with Five Designers and One Packaging Material Company

The interviews were conducted in the months of February to March 2020. The audio of the interviews were recorded with the consent of the interviewees. Transcripts of the discussions were made later in Japanese (as the interviews were all done in Japanese), and the important quotations were then translated into English. From these English translations, I applied inductive reasoning to structure the collected data. This is an effective way to connect the dots, find common themes, and induce theory. From the raw data transcribed and translated from the interviews, I coded the thematic topics as first order concepts (Figure 20). Repeating themes kept coming up, which I collected into second order concepts. Finally, I put the second order concepts into aggregate dimensions. The result is a data structure diagram (Figure 21), which helps not only to compile the data visually, but also graphically expresses how the raw data was taken into more abstract concepts (Gioia et al., 2013).

#### 1st Order Concepts

- General difficulty in sustainability because of cost
- Systemic difficulty as a nation

- Time for adaptation to trend in packaging
- State of packaging in Japan is in a mature phase
- Interpretation being as a phase in the flow of time

- Design functions with the client as decision maker
- Design is an order-based service

- Storytelling is one of the essential tasks of packaging
- Packaging transcending into metaphysical concepts
- Packaging has a bigger job to bring happiness

- Many aspects entangle in selling product
- Packaging cannot be evaluated as the single source
- Societal movement like disease also impact

- Sustainability is only to make something less bad
- Human life is simply not sustainable
- Sustainable alternatives have counter negatives

- Purpose is for people to take in their hands
- Purpose is brand equity lasting in consumers' minds
- Purpose is to convey the company's message

- Designers can impact society greatly
- Client work may not be sustainable
- Good design is societal merit

- Consumer importance is to raise awareness
- Society gearing towards more sustainable consumption
- Consumer decision not rational, but unconscious

- Sustainability becoming a trend
- Movement of less plastics to more paper
- More cases recently with wider awareness of SDG

- Meaning of packaging in Japan is different than the West
- Package is the product
- Japan has its own cultural context

- Issue is not in the end packaging but on a bigger level
- Design is hidden in the product itself
- The brand and the story of product leads the design

Figure 20. 1st order concepts

## 2nd Order Themes

## Aggregate Dimensions

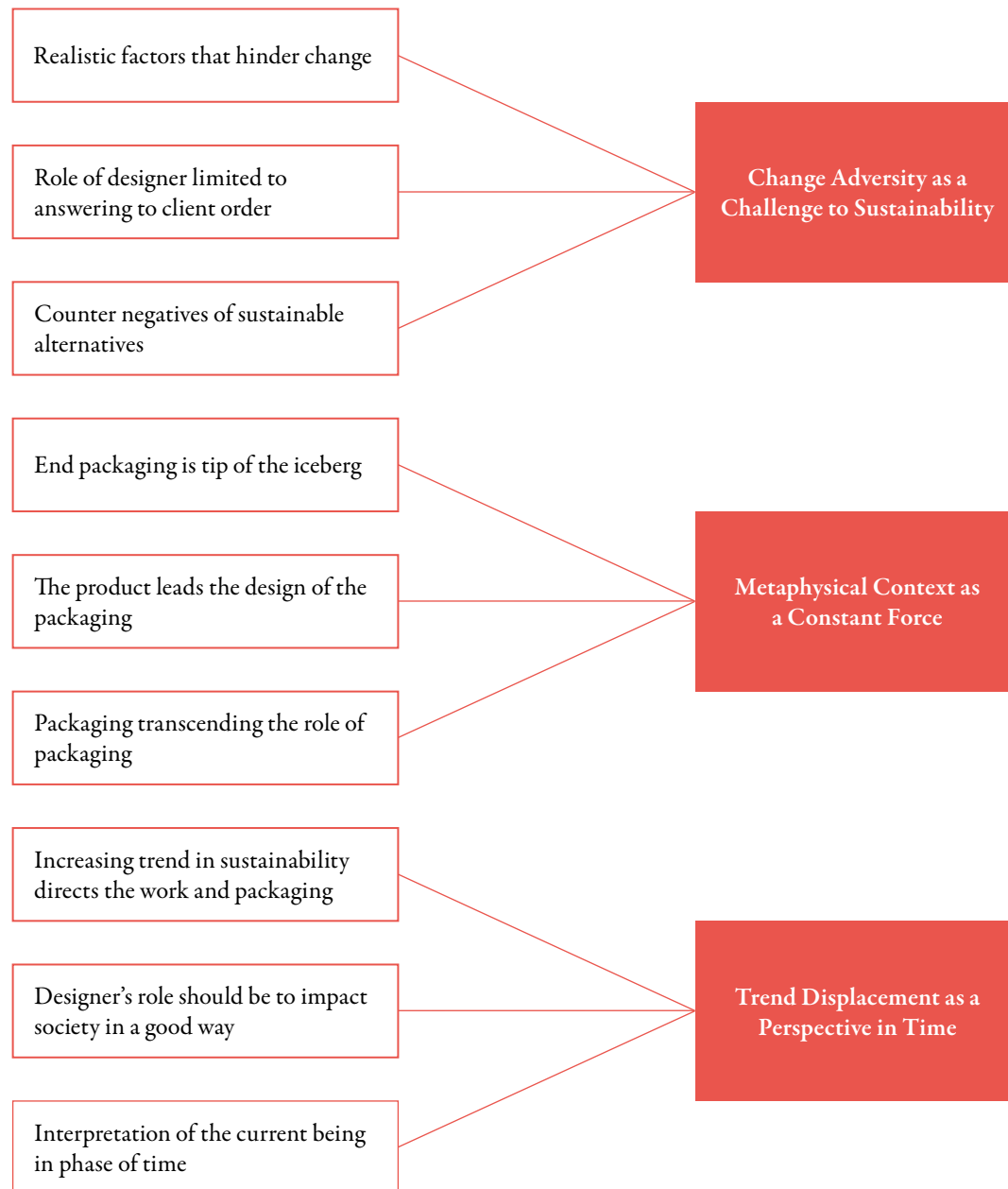


Figure 21. Data structure leading to aggregate dimensions

## 4.3.2 Analysis : Inductive Reasoning from the Interviews

From the six interviews that I conducted with the design experts and packaging company, common thoughts were uncovered, to which I was able to assemble into three big categorical themes: change adversity, metaphysical context, and trend displacement. Remembering that the third research question was explored through the interviews - *Can Japanese packaging for high-end confectionery be in sync with an increasingly sustainable world, while staying true to the socio-cultural values of Japan?* - the themes have been analyzed as the following.

### 4.3.2.1 Change Adversity as a Challenge to Sustainability

In the era of imminent climate change and efforts like the SDGs, the country has just woken up to tackling them not only as a government effort, but also industry practices. However, the challenges that Japan faces with regards to the above research question are clear. Keeping the life cycle thinking of packaging in mind, the interviews with the professionals reveal that packaging sustainability cannot be realized by the end product itself. Instead, it must be dealt on a holistic scale, involving the systemic structure of Japan as a cultural entity. This produced two main points as challenges to sustainability; realistic reasons and mentality reasons.

Firstly, there are the realistic reasons. Even a small change in the line of a factory can cost a company millions, and by doing so, the cost might be reflected in the products; consumers neglecting to buy the product with the increased price, will counter the initial efforts. One of the interviewees claims that everyone wants to be more sustainable, but on a realistic cost level, it is hard precisely because of such pragmatic reasons:

*“Everyone wants to be mindful of sustainability. Businesses and consumers. But they can't. The cost will increase.”*



Another realistic reason that came up often during the interviews is that as the theoretical study discovered earlier, switching from one material to another has its own downsides. Using paper may cost the lives of virgin trees, which the impacts, needless to say, contribute to climate change on various levels. The interviewees acknowledge that many companies (manufacturers) lack the resource and the justification of calculating the total impact of switching from one material to another:

*“Glass is heavier so the carbon emission in transportation is more than plastic. Organic materials use more water and more trees. There are so many hidden demerits in material change.”*

Additionally, the risk of product damage may also result by switching materials; if for example, the product becomes damaged during transportation (by the paper packaging instead of plastic), then the product must be discarded, and food waste will increase. Sustainability is not a simple "on or off" button that can be easily switched back and forth with materials.

Secondly, the discussions with the interviewees reveal that Japan as a culture is inherently risk-averse, and that characteristic stems across all stages. This is a common understanding in an extremely high-context culture, where decision making is based on a time-consuming internal participatory process favoring consensus. Making a change, however small it may be, requires various levels of approval in Japanese structured organizations. The reason why these approvals are required is the responsibility that incurs by taking the risk. Such matter is significant because it controls the way and speed of an organization's approach. Examples like Nestlé's KitKat package switching its entire line from plastic to paper was a bold move, as Nestlé absorbed the cost that incurred. Though this study does not cover the science of organizational management, it is a factor that must be mentioned as a critical point in taking realistic steps towards sustainability. One interviewee observes that Japan, in comparison to European companies that are progressive in sustainability, the aversion to change may be a major hindrance to change initiatives:

*“Japan somehow cannot take these systemic sustainability efforts like European companies can.”*

#### 4.3.2.2 Metaphysical Context as a Constant Force

As previously discovered from the theoretical study that packaging holds a special meaning in Japan, one of the biggest curiosities to it was the question of how much that still holds in the modern context. In other words, “how much is packaging in Japan, something special?” Though the result from the earlier survey revealed some insight of the consumers' mindset, the semantic meaning of packaging in Japan required insights from experts to augment the multi-dimensional analysis. The interviews with the industry professionals therefore, were imperative to confirming the consumers' perspective from the vantage point of how experts think and shape the packaging that line the shelves and ultimately travel to consumers' hands.

The results of the interviews find two things related to metaphysical context; firstly, there still very much is special meaning behind packaging, especially for the high-end products that serve as gifts. Secondly, in order to attain sustainability, the organization behind the products must have a philosophy on sustainability.

Firstly, because the societal concept of *On* and *Giri*, whether modern people are aware of it or not, is still a major part of what constitutes Japanese culture, the custom of gift-giving will most likely stay the same. Minor changes like using more eco-friendly materials may come in as we saw in the trends of sustainability, but the underlying ritual is projected to remain. One of the main findings from the interviews is that sustainability, therefore, must be looked at from a context in Japan. It can almost be said that the term sustainability is an exotic term. One of the interviewees states that this adherence to the custom of Japanese culture cannot simply be replaced with such concept like sustainability:

*“Adapting to sustainability all of a sudden will be difficult. Japan has its own context.”*

Another interviewee confirms the sheer difference of the objective in packaging in Japan and the rest of the world:

*“The purpose of packaging in Japan is different from the rest of the world. The culture, tone, homogeneity, all affect it in layers.”*

It is interesting to observe that this special meaning of packaging in Japan is derived from so many aspects of the culture. Although the theoretical study discovered that the packaging in Japan is spiritual in addition to its functional properties, the interviews revealed further ideas. Because Japan is an island country (an assembly of four big islands and many other small ones to be correct), the homogeneity played a role in forming these rituals and beliefs. This was further enforced in the Edo period when the country closed off its borders for over 200 years. Good or bad, this accomplished a certain inward mentality where people had minimal influence from outside nations, allowing them to develop their own culture for a substantial amount of time.

If the culture of gift-giving and the importance of packaging will remain, what will the packaging phenomena look like for Japan? The good news is that the country has the ability to take in the exotic term and build up on it. For example, virtually all of the designers expressed that when designing a package, the product itself serves as the inspiration for the design. This is a common answer that was heard in the interviews:

*“The story and background will become the inspiration itself.”*

Through the study, I discovered that most of the designers that I interviewed, not only design the end packaging, but also the brand and identity of the products with it. In many cases, it is common that the clients first approach the designers with a specific request of designing the end packaging only, but the designers take a step back and look at the story behind the product to gain inspiration for the packaging. If packaging was to be sustainable, then the product must abide by sustainability as well. The manufacturing company must therefore have sustainability traits. Otherwise, the packaging will merely be “make-up” on otherwise ingenuine souls. It is propositional that if a packaging wishes to be sustainable, then the product must be sustainable, and behind it, the company must be sustainable.

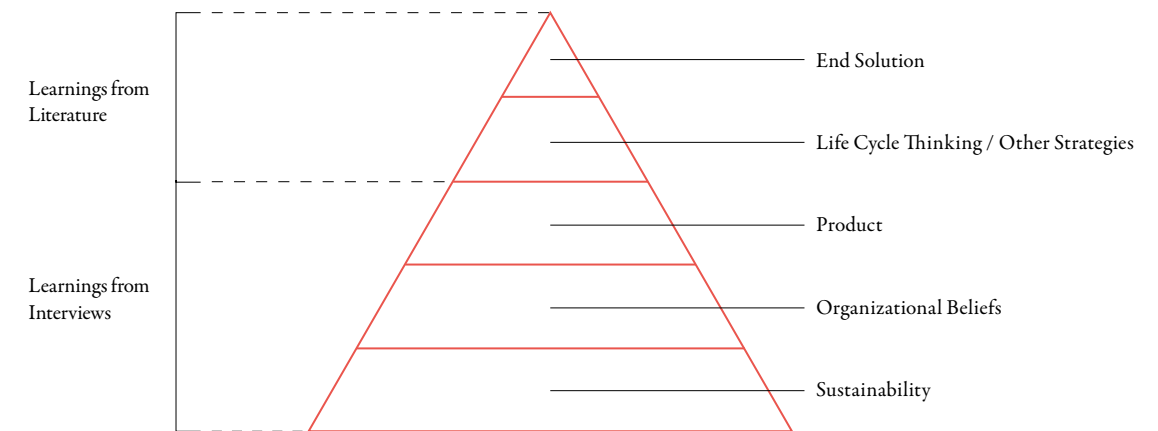


Figure 22. Behind sustainable thinking methods and frameworks

This is a challenge that simultaneously presents an opportunity for immense forward steps for businesses and practices in Japan. Sustainability cannot be realized only through the packaging of confectionery - the product, the story, and the whole company behind it must be sustainability focused. Furthermore, because packaging has such a deep meaning in Japan, it is imperative that the meaning of packaging itself becomes sustainable. Figure 22 visualizes the structure of this understanding, where each level rests on a wider level of concept. From an adversarial viewpoint, even if a confectionery claims its packaging to be “sustainable” by using paper instead of plastic for example, the product and the company’s foundational philosophy must be examined, in order to adjudicate sustainability.

Conversely, what this implies further, is that even though the amount of packaging material may be more for certain products, it has the opportunity to represent sustainability, so long as the product and the organization’s philosophy and actions are aligned. These efforts are precisely the sustainability frameworks that are studied in this thesis in Chapter 2 - the life cycle thinking, cradle to cradle philosophy, Hannover principles, and other strategies and frameworks. Japanese packaging for high-end confectionery therefore, can absolutely be in sync with sustainability. A comment from one of the interviewees confirms the importance and necessity for the balance to exist between delight and sustainability:

*“Humans need this kind of stimulation. You can't strip everything away to become sustainable, especially for things like gifts.”*

#### 4.3.2.3 Trend Displacement as a Perspective in Time

As the world and Japan brace for more topics on climate change and sustainability, a common theme that kept coming up was that Japan is currently in the phase of waking up to the issue. Since the continuous expansion of the Japanese economy after World War II, perhaps the country has favored capital growth too much over the consideration of the future of the planet. Now that the theme of SDGs and sustainability is catching up in Japan, we will be seeing more of this in the upcoming years. Many of the interviewees, both designers and the manufacturer, state that they are clearly experiencing an increased amount of work involving sustainability in these past few years, to keep up with the trends and topics of society. One of the interviewees state that phenomena is a reflection of the country being in a phase in the bigger scope of time:

*“Perhaps Japan is now in the point of time where sustainability is being focused.”*

And most probably, the hype of the term “sustainability” will gradually adapt. The theme of being nice to the environment is not new to the country. As previously explored, during the Edo period (1603-1868), the Edo city (now Tokyo) was self sustainable (Brown, 2009). The country had closed its doors to all foreign entities then, and the city had no other choice than to look inwards for thriving. Constant effort allowed it to become self-sustaining. To the people back then, sustainability may seem rather corny - to them it was simply survival. These instances exemplify the possibility that Japan can take towards a sustainable future. Packaging therefore has the potential to follow it, as one interviewee states about the definition of good packaging as its relation to time:

*“Good packaging is to be in sync with the era and consumers.”*

If we look at the current phase of sustainability in Japan as a single point in the big flow of time, the dots seem to connect, and the storyline becomes clear. There were eras in which Japan exhibited sustainable living. Post-war economic boost and events lead to the current state of packaging. The world realized sustainability as an imperative move, and it trickled across to Japan.

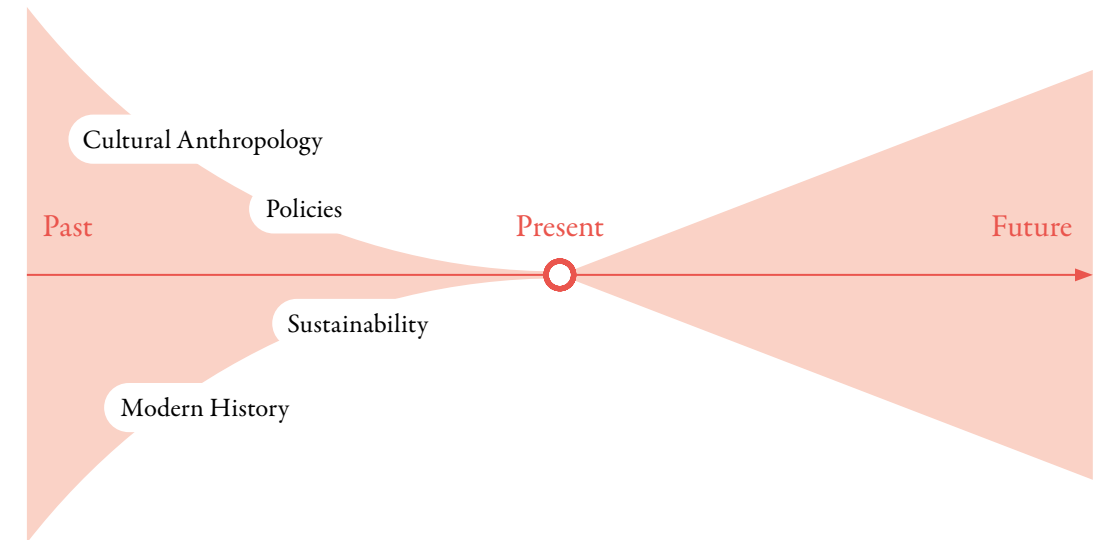


Figure 23. Trend displacement as perspective in time

Thinking about the current in terms of the big flow of time is therefore important, as it accumulates the past and expands the thinking and possibilities of looking into the near future. Figure 23 visualizes this by placing the learnings from the theoretical study and the empirical study on a timeline. This simplified diagram summarizes the formation and the reasoning of how Japanese packaging has shaped to the way it is now, as well as how the topic of sustainability joins forces with the other drivers. Understanding that all of these forces have an impact on the way packaging is practiced in the country, it makes sense, as synthesis, to contemplate the future of Japanese packaging.

#### 4.3.3 Limitations

This design ethnography through the six semi-structured interviews has its limitations. The biggest one is the number of the interviews completed, which in an ideal case will have had more interviews done to validate all of the findings. Realistic issues such as the time and location, and the adjustment to the spread of the pandemic, were obstacles in acquiring more interviews. As the topic of this study is highly explorative, the interviews also did not give clarified answers, but served more as inspirational bits of information that lead to the final synthesis, which is thinking about the future of packaging in Japan.

## V. DISCUSSION

### THINKING ABOUT THE FUTURE OF PACKAGING IN JAPAN

Through the multimethod approach using both quantitative and qualitative methods, the study gained first-hand insight to the question, *Can Japanese packaging be in sync with sustainability?* In order to create a three dimensional perspective on this issue, it looked at three different angles that directly tie to the primary packaging - the designer, manufacturer, and consumer. The view from consumers was gathered through a survey to 230 citizens, and the view from the supplier and designers were taken from semi-structured interviews. Complementing the survey and the interviews was the rapid cultural calibration, where I went out to experience the phenomena of purchasing high-end confectionery myself. Although there are clear limitations in each research method, the study was able to extract insights and form this synthesis.

Marrying the findings from the theoretical study and the empirical study, a thought came to my mind - because the meaning of Japanese packaging has such a special connotation in the culture, it could have the potential to be harmonious with sustainability. As figure 24 shows, whereas the two forces that seemed to be looking in different directions, they now look in the same way. Further in the future, they may not only be parallel, but can become one - Japanese packaging can become virtually synonymous with sustainable packaging.

How exactly can these two forces become one? As a framework for thinking about the possible future, this discussion section employs methods from future studies.

#### Scenario Work as a Methodology

Future studies and scenario work are important because they equip us for the future without the risk of being surprised or unprepared (Bishop et al., 2007). Many scenario work has been done around the topic of sustainability, lifestyle, and consumption. Demos Helsinki advocates that scenarios are not predictions, but instead, is a method to scrutinize

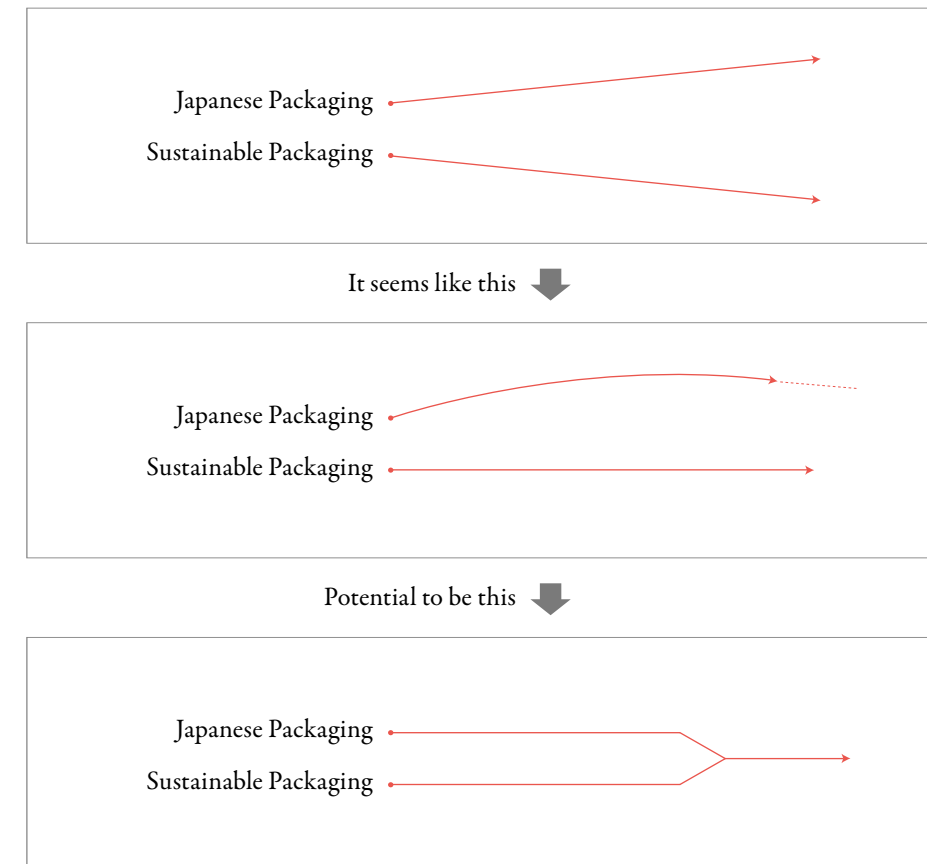


Figure 24. Juxtaposition of forces becoming synonymous

extreme possibilities aimed to help decision-makers plan for a future that is currently unthinkable (Demos Helsinki, 2012). In the context of sustainability, in cooperation with the SPREAD Sustainable Lifestyle project from 2011 to 2012, they reported four scenarios where sustainable ways of living were supported by societal effort and lifestyle change (2012). Although there are dozens of methods to conduct scenario work, this uses a simple backcasting to generate the scenario (Bishop et al., 2007).

## Backcasting as a Method

Backcasting is a method where a desirable future is defined as the starting point, and different paths leading to the present are laid out (Neuvonen, 2016). Many studies that employ the backcasting method propose several different scenarios through participatory workshops (Demos Helsinki, 2012), but this thesis will present only one done by myself, as the scope of the thesis permits. Thus, this is by no means an exhaustive scenario work that futurists utilize; instead, it is used as a base to think about the future.

## The Desired Future

The desired future for packaging in Japan is defined as one where sustainability is achieved, and at the same time cultural significance is maintained in harmony. There are two reasons why this is defined as the desired future. Firstly, sustainability is unarguably necessary, as studied in this thesis. Secondly, the cultural significance of Japan is the driver of the nation's valuable characteristics, such as the hospitality of people, the precision of public and private business services, the cleanliness of scenery, collective effort in recycling, and so on.

## The Scenario through Uncertainties

The scenario assumes that material innovation will continue to flourish, with more packaging materials compostable, or do not use virgin resources. The scenario also has uncertainties, which are derived by behavioral factors that influence the people (Demos Helsinki, 2012) of Japan. The first uncertainty is that in the future, socio-cultural norms, heavily influenced by tradition, may or may not decay. The second uncertainty

is the awareness of sustainability. As more innovations emerge as services or products, consciousness among people is something that cannot be controlled. These two uncertainties are put across two axes in order to create four quadrants in a coordinate plane (Figure 25). Each quadrant has the opportunity to represent different possible scenarios based on their properties of the axes. This study only takes

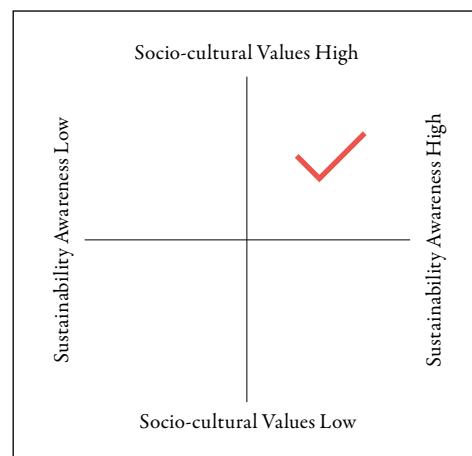


Figure 25. Four quadrants of possible scenarios

the first quadrant in order to think about the preferable future, where the socio-cultural values and sustainability awareness are both high. Organizational concepts such as *On* and *Giri*, still underlie human interaction behavior. Therefore, gift-giving remains a major custom, and hygiene and the meaning of packaging still possess important connotation. What is different from the present is the married effect of the high sustainability awareness, in which practices surrounding the rituals are sustainable.

## Key Milestones

For this future to happen, these following milestones are met:

1. Stricter government policies regulate the industry so that circularity is the key driver in consumer and retail activity involving packaging waste
2. Material innovation across all material to become compostable or go back to nature entirely
3. Value of package holding sanctity is re-understood; because of this people start to put immense care to the cycle of the waste

## Sustainable Future Resembles a Past State

The above key milestones may represent quite a big step from the present, but they are not so far-fetched. In fact, they look direly similar to the Edo (now Tokyo) city during the Edo period (1603-1868), where government policy and community effort achieved an entirely self-sustainable city when the country had shut its doors to the world for centuries (Brown, 2009).

Firstly, in this scenario, government regulation forces circulation in business practices. An example of such policy is packaging waste to be collected by the respective businesses responsible for producing them. Material extraction from these collected packaging waste subsidizes the cost of new packaging manufacturing at scale, and therefore a circular model is not only enforced by the policy, but intrinsically among businesses. Secondly, material innovation advances so that even material like plastic can decompose and return to nature. Examples of dissolvable paper with plastic-like durability are already happening. This practice resembles the traditional Japanese packaging art possessing natural elements such as wood, bamboo, straw, clay, and other derivatives like paper

and cloth (Oka, 2008), where the material naturally went back to the earth. This also ties back to the strategies and frameworks of sustainable packaging, such as the Cradle to Cradle® concept and the waste management preference that was studied in Chapter 2. Thirdly, with material innovation, a nation-wide campaign on the significance of packaging is executed. This occurs on two levels - one in which the scientific circulation of packaging waste is explained, and another in which the significance of packaging culture is promoted. Because the metaphysical value of packaging in Japan is advocated, the majority of citizens perceive packaging as something sublime that cannot be discarded with ease. This kind of future vision presents packaging not only as a product, but also a symbol of sustainability.

The milestones are general landmarks and do not present specific "to-do" actions. Instead, it serves as a base to think about the desired future and what big changes should happen. It encourages us to open our eyes and invites further sustainability discourse to convene. These not only strengthen understanding of the complexity of the topic, but also increases the effectiveness of sustainability efforts, especially in specific cultural contexts.

The backcasting method speculates a possible and preferable future for the packaging phenomena of Japan. This method applied here was not meant to be a complete scenario work, but instead was used as a framework to think about the desired future and what kind of steps might be needed in order to achieve it - one in which sustainability and culture are balanced in harmony.

## VI. CONCLUSION

Climate change is an imminent hazard with substantial physical impacts across the world (Woetzel et al., 2020). Sustainability therefore prevails as a mega trend that countries, industries, and consumers must prioritize. Failure to alter the course may possibly transmute the earth (Hindlian et al., 2019). Global efforts like the SDGs, led by the United Nations, guide the course of action in taking steps to sustain the planet and civilization. The environmental segment of the goals advocate consumption habits to change drastically. Packaging waste is especially an issue, as a big portion of household waste consists of packaging (The Japan Containers And Packaging Recycling Association, 2019).

This thesis studied the packaging phenomena in Japan, where the practice of packaging seemed to inherently contradict with the doctrine of sustainability. Through theoretical study, the thesis anatomized that many social and cultural factors shape the Japanese notion of packaging, where the cultural values are deeply engraved into the rituals; the big concepts are gift-giving, hygiene, and packaging as divinity. These value based rituals intertwine with each other, comprising the culture of Japan. Through the empirical study, a multi-dimensional perspective was constructed to triangulate the phenomena from the immediate stakeholders that surround packaging in Japan. The study then formed a synthesis - a future scenario in which Japanese packaging, influenced by cultural practices, can become synonymous with sustainability, because of the care and attention that the culture gives to packaging.

Juxtaposing the two contrasting forces, the study aimed to uncover the meaning of packaging design in Japan in an increasingly sustainability conscious world. Taking in the learnings from sustainable efforts seen in the world and in Japan, the study identified three things. Firstly, in the flow of time, the attention to sustainability in Japan is surging, and the ostensibly contradicting forces are starting to look the same way. Secondly, while some of the tangible practices of packaging for high-end confectionery in Japan may appear excessive, they must be viewed with the consideration that the rituals and mannerism surrounding packaging phenomena has a deeper acquaintance to societal customs. Lastly,



though at a glance, Japanese packaging and sustainability seem to be contradictory, because the notion of packaging in Japan holds such a heavy weight in its culture, it has the potential to become virtually synonymous with sustainability. Three milestones are identified in order to reach that desirable future, aiming to provide insight into what should happen around regulations, business practices, and awareness. This reflects similarity to the Edo city, where Tokyo in the 17th to 18th century existed in self-sustainability.

## FOR FURTHER RESEARCH

The study finds that Japanese packaging must be considered in its own cultural context, and that the nation is currently in the midst of an awakening to sustainability. Numerous cases of effort in Japan signify the gravitation towards sustainability, and now is simply the beginning. Examples of rigid recycling policies and the citizen's willingness to follow them, display the possibility of what the country is capable of achieving. Thinking about the grand theme of sustainability and culture, I identify three points for further research.

Firstly, the thesis studies the dimension of packaging in Japan through explanatory and exploratory approach. The gap in the current knowledge is identified, and the chasm is supplemented in a theoretical manner. One angle for further research is to apply it into practice with an actual confectionery manufacturer. This highlights the need for not only involving multiple stakeholders from the packaging LCA that was studied, but also ensuring that the company/product/package communicates the sustainability to consumers, and monitoring the effect over a certain period of time.

Secondly, as this study took only one preferable scenario, done by myself, from the backcasting method in the discussion section, the other possible future scenarios can be developed, preferably with stakeholders through workshops. Each of the scenarios has the potential to represent alternative outcomes; in thinking about the future, it is imperative that different possibilities be contemplated and narrated, so that the nation and its people can be better prepared.

Lastly, the meta-meaning of packaging transcending utilitarian function in the modern context is something that can be explored as a single subject. Hypothesizing that modernization has somewhat diluted the knowledge and awareness of packaging holding sanctity, it will be interesting to see if the notion of packaging as a spiritual connector can be revived. If it can, what meaning and impact will it have on society? In a world where digitalization and transformative technology evolve so rapidly, the connotation of tangible packaging and its functionality as a medium to connect with spirituality, is something that I wish to see further explored.

## VII. REFERENCES

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## VIII. APPENDICES

### KEY QUESTIONS FROM SEMI-STRUCTURED INTERVIEWS WITH FIVE DESIGNERS

#### About the Design Process

- What is your design process?
- Are there cases where you propose a packaging design without order?
- Where does packaging design inspiration come from?
- How do you anticipate market response?
- What is the number one challenge in package design?
- Do you think (and design) about the life cycle of the package after consumption?

#### Evaluation of the Package Design

- How do you measure packaging design success?
- Do you ever look into consumer response for packaging evaluation?
- Can you tell me examples where your packaging design did not work well?

#### About Japanese Packaging

- Where and how does Japanese packaging place in the world?
- How has packaging design changed throughout the years (in Japan)?
- How is Japanese packaging special?
- What meaning does it have?

#### About Sustainable Packaging

- What are the challenges in working sustainably?
- What are the things designers/manufacturers/consumers can do?

#### Closing Question

- What does good packaging mean to you?

## KEY QUESTIONS FROM SEMI-STRUCTURED INTERVIEW WITH ONE PACKAGING MANUFACTURER

### About the Company

- Please tell me about your company and your business operations.
- Is printing and material R&D also a part of it?
- Please tell me the general manufacturing process of packaging.
- What is the most popular (among your products) today?
- Where in the supply chain do you place?

### About Sustainability and Package Manufacturing Business

- What is the background behind your (company's) interest in sustainability?
- Do you advocate for clients and consumers?
- Please tell me about the trend that you see in the industry today.
- Are there many custom originals?
- What is your (company's) position with plastic, in an increasingly anti-plastic society?
- Please tell me about FSC certification, and how you apply it to your business.
- How many other businesses are conscious like yours?
- What are the challenges in working sustainably?

### Product Specific

- Your product X received an award for its innovativeness. Please tell me the background.
- Are there cases where you propose a packaging design without order?

### About Information Publicity

- Please tell me the background behind the publicity efforts for your company.

### Evaluation of the Package Design

- How do you measure packaging design success?
- Do you ever look into consumer response for packaging evaluation?
- Can you tell me examples where your packaging design did not work well?

### About Japanese Packaging

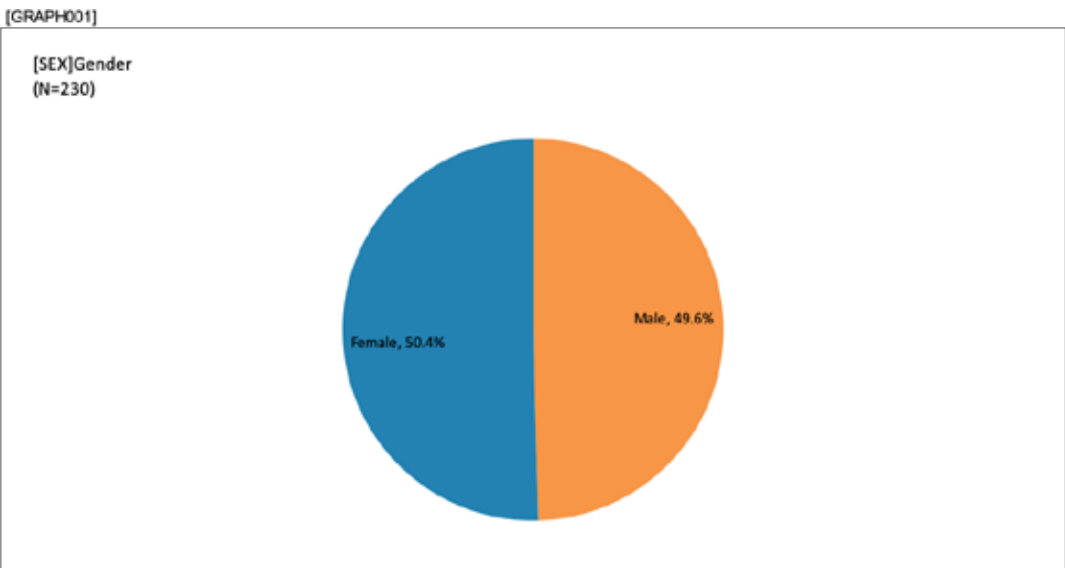
- Where and how does Japanese packaging place in the world?
- How has packaging design changed throughout the years (in Japan)?
- How is Japanese packaging special?
- What meaning does it have?

### Closing Question

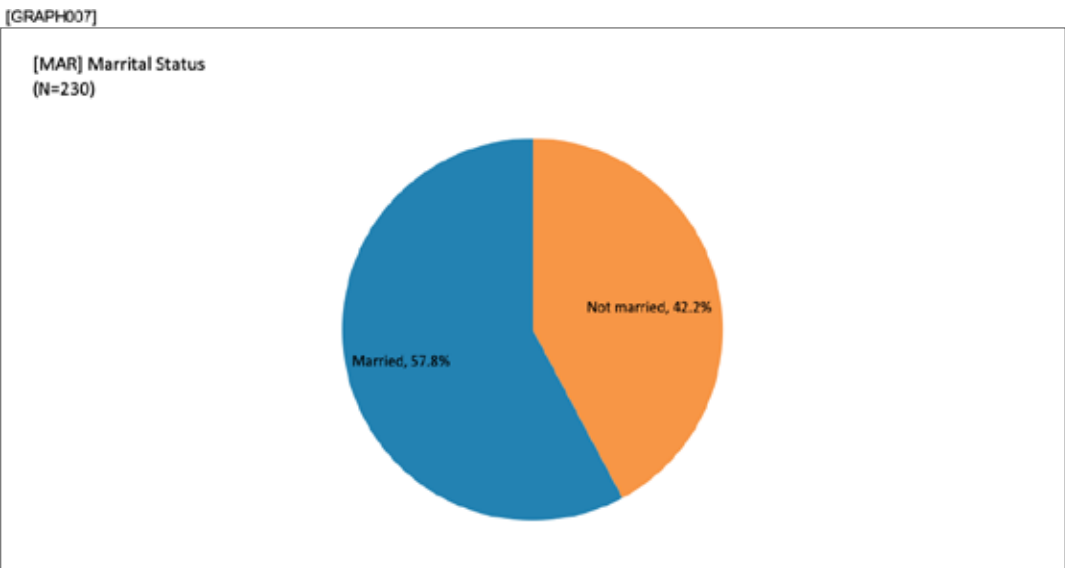
- What does good packaging mean to your company?
- What do you expect in clients, designers, and consumers?

SURVEY CONTENT FULL

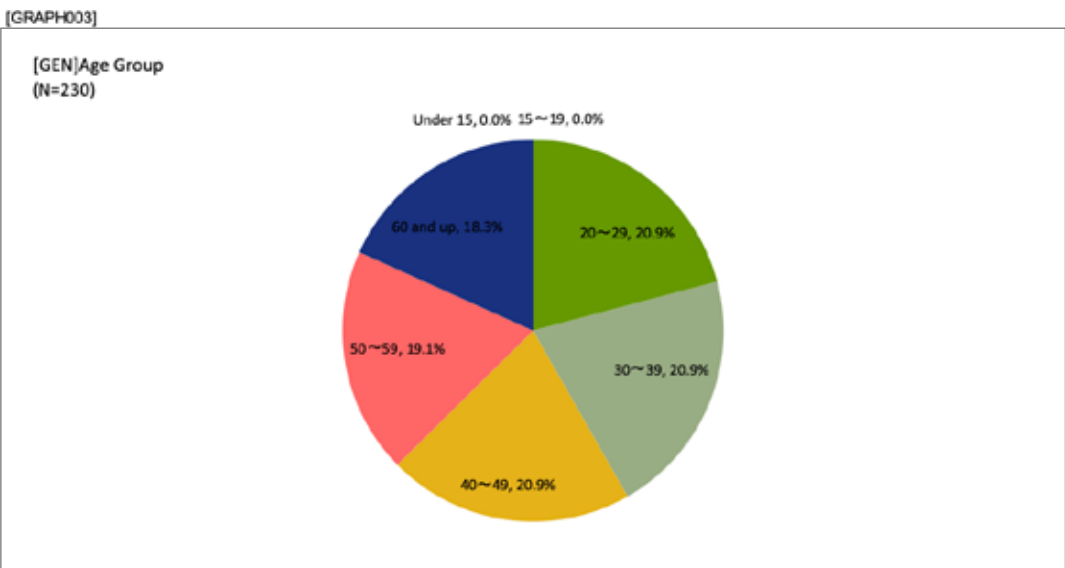
Data for graphs 001, 003, 007, 008 were collected autonomously by *Surveroid*, and not by the researcher.



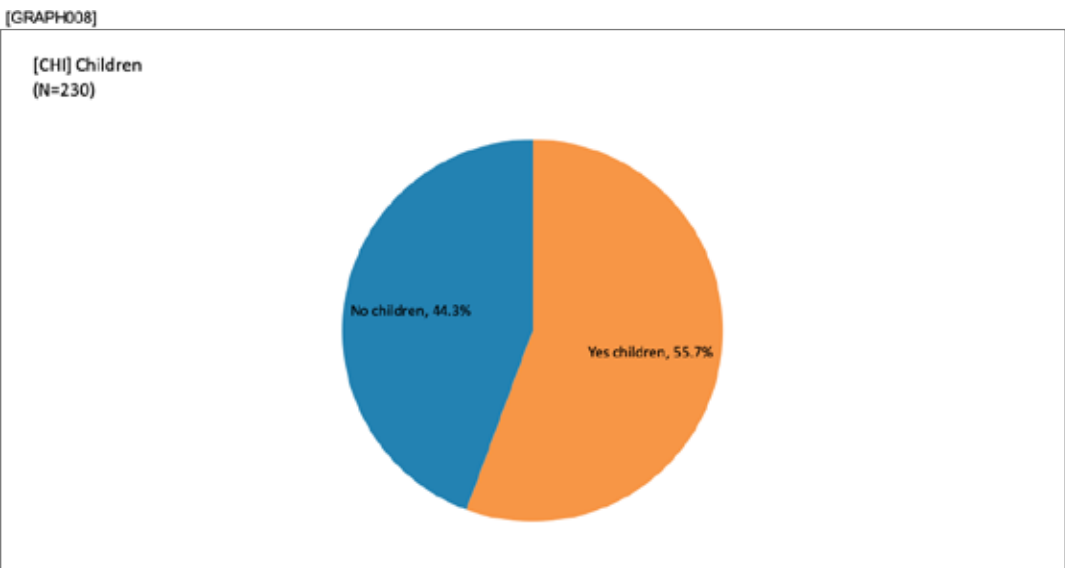
Monitor gender distribution



Monitor marrital status



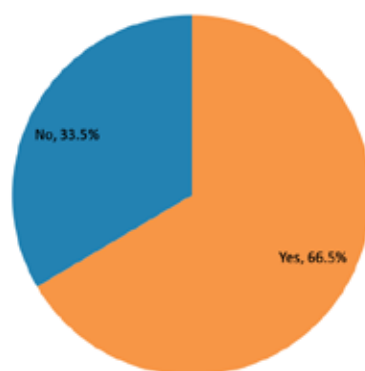
Monitor age group distribution



Monitor children status

[GRAPH009]

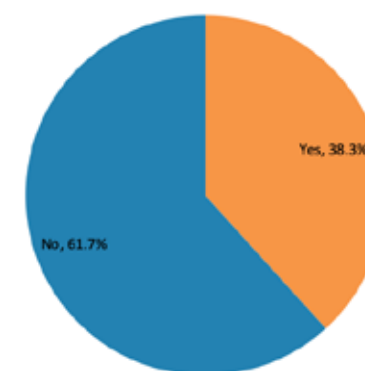
[Q1] Have you ever bought a confectionery, for example at a department store, or other specialized stores?  
(Select One)  
(N=230)



Q1. Have you ever bought a (high-end) confectionery, for example at a department store, or other specialized stores?

[GRAPH011]

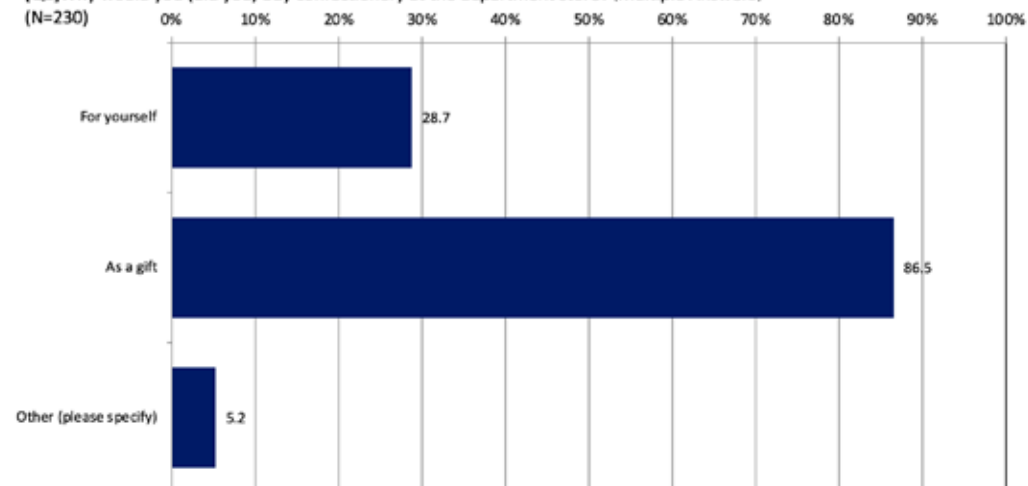
[Q3] Assuming that it was within budget, have you ever bought confectionery based on the packaging design? (Select One)  
(N=230)



Q3. Assuming that it was within budget, have you ever bought confectionery based on the packaging design?

[GRAPH010]

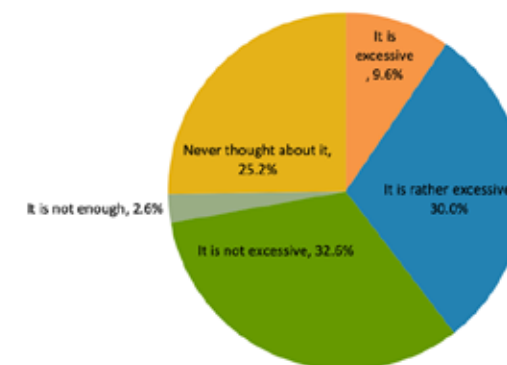
[Q2] Why would you (did you) buy confectionery at the department store? (Multiple Answers)  
(N=230)



Q2. Why would you (did you) buy confectionery at the department store?

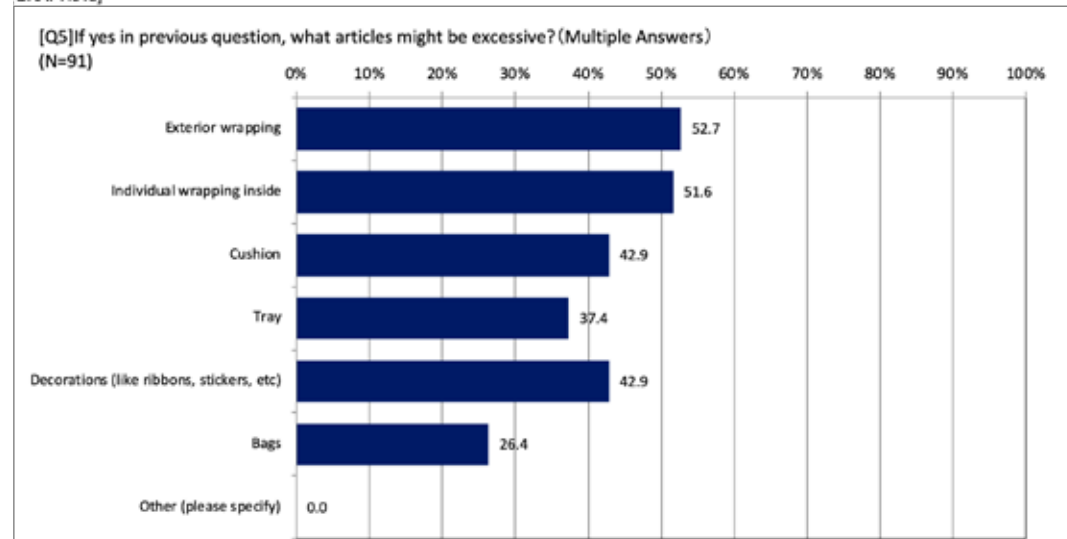
[GRAPH012]

[Q4] Which of the following most closely matched your opinion about the volume of packaging in the confectionery that you can buy in department stores? (Select One)  
(N=230)



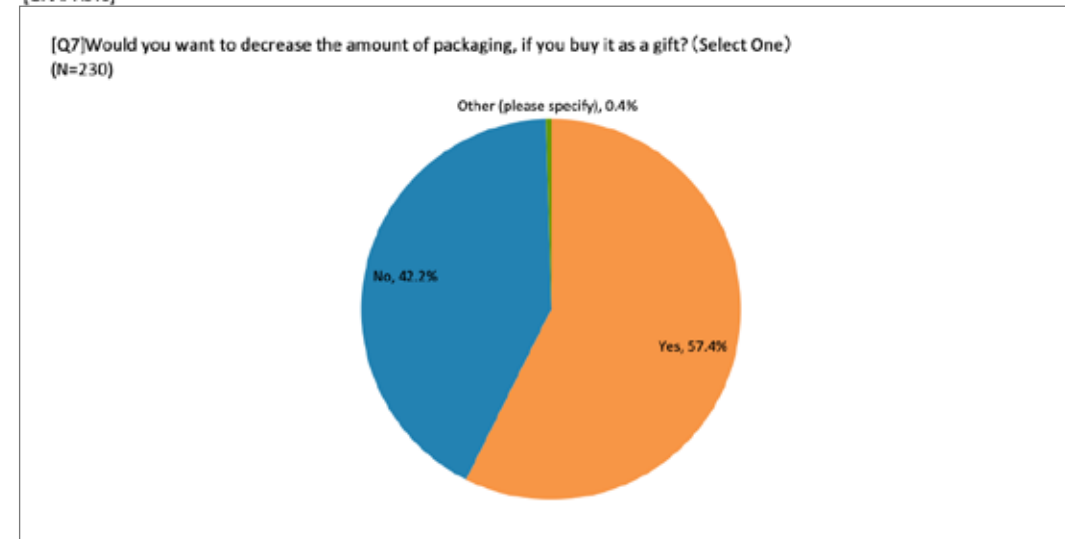
Q4. Which of the following most closely matched your opinion about the volume of packaging in the confectionery that you can buy in department stores?

[GRAPH013]



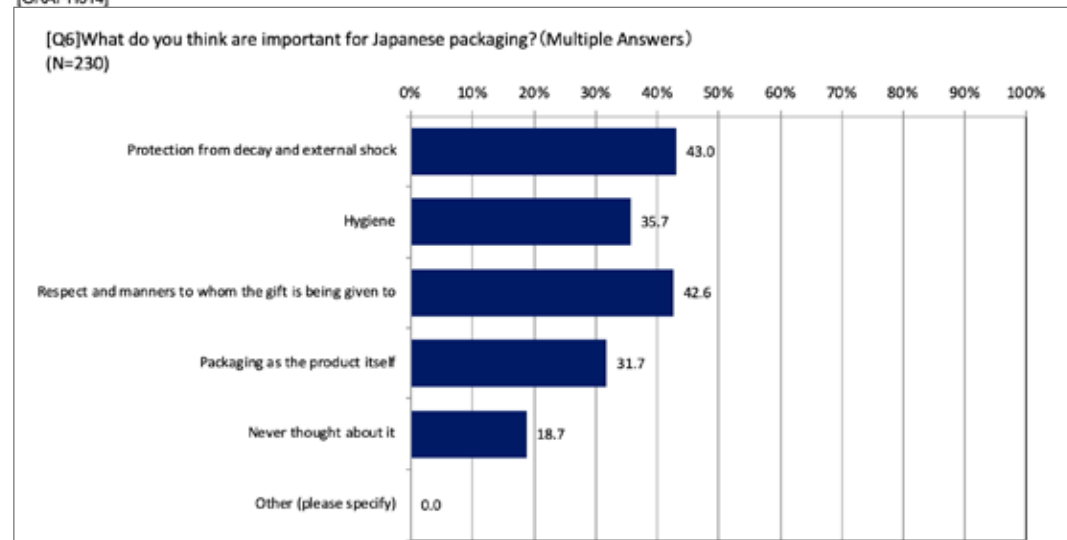
Q5. If yes in previous question, what articles might be excessive?

[GRAPH015]



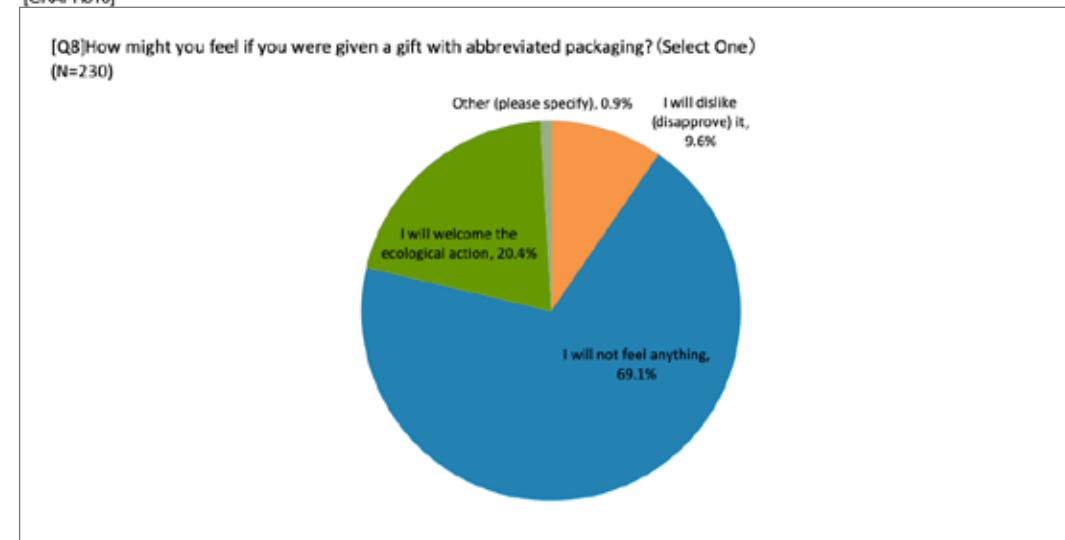
Q7. Would you want to decrease the amount of packaging, if you buy it as a gift?

[GRAPH014]



Q6. What do you think are important for Japanese packaging?

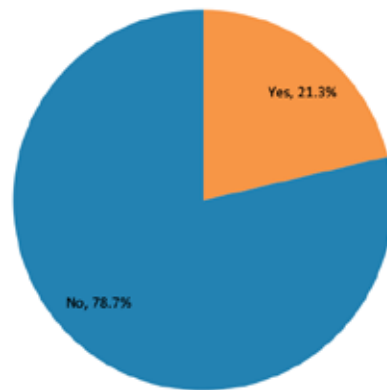
[GRAPH016]



Q8. How might you feel if you were given a gift with abbreviated packaging?

[GRAPH017]

[Q9] Do you know of any confectionery that are putting effort into ecology? (Select One)  
(N=230)



Q9. Do you know of any confectionery that are putting effort into ecology (sustainability)?

[Q10] If yes in the previous question, can you name the brand/company?

Brand/Company	Count	%
KitKat	10	20.83
Meiji	3	6.25
Morinaga	2	4.17
Bourbon	1	2.08
Glico	1	2.08
Morozoff	1	2.08
Ogurayama	1	2.08
Takasagoya	1	2.08
Harada	1	2.08
Rokkatei	1	2.08
Fujiya	1	2.08
Chidori Manju	1	2.08
Happy Turn	1	2.08
Forgot name/Other	23	47.92
Total	48	100.00

Q10. If yes in the previous question, can you name the brand/company?



## AFTERWORD

In the summer of 2019, I was enjoying my holiday in Tokyo hosting an old friend from China. As we stopped by a supermarket and bought some beverages and snacks, my friend abruptly said “packaging in Japan is honestly overkill.” I agreed, but I realized I could not explain why so. I spent the summer paying attention to the amount of packaging in the items that I purchased, and also thinking about what my friend had said. Indeed, it seemed like overkill. I also looked for answers online, where I read multiple personal blogs, written by both Japanese and non-Japanese people, in which the authors were flabbergasted by the amount of packaging they had experienced in Japan. That initial wonder was what triggered this thesis. Fast-forward eight months, I am writing this afterword to my thesis. Through the journey of this study, I discovered things about Japan that I never imagined I would. Even my elder family members (who presumably know more about Japan and its traditions) were astonished at some of the findings. I hope this study sheds light on the myths of not only the packaging in Japan, but also the customs that exist in the culture as it trickles down to packaging; perhaps it will give a clue to the authors of the blogs on why packaging in Japan may seem excessive. As I hope for a sustainable future, I wish for the culture not to be obliterated, but preserved in harmony with the era. Cultural practices may change and adapt, but I am certain that the beauty of the nation lies in socio-cultural values, and I aspire for it to remain as an inspiration to the world.



